The Bristol
Medico-Chirurgical Journal.

JUNE, 1896.

THE CLINICAL SIGNIFICANCE OF THE HUMAN HAND.

BY

ARTHUR S. WOHLMANN, M.D., B.S. Lond.

THE hand is so important a part of the human anatomy, it has played so large a part in the evolution of the human race, and has so largely contributed to the eventual triumph of man over his brute competitors, that it must always have an especial interest for us, even in the study of our always interesting bodies.

When first a patient comes before us—even before we have felt his pulse or wisely shaken our heads over his extended tongue—we have from force of habit learned much of him by a hasty critical analysis. Almost unconsciously we have noted his general vitality, compared his height and weight—his slight stoop, perhaps, or the thickness of his great omentum.

Unconsciously we have studied his face, and have gleaned therefrom something of his character, of his present condition, often of his past history. In the note-book of the mind we have already jotted down shorthand memoranda as to his cyanosed lips, the mottled venules of his cheeks, or his yellowed conjunctivæ: notes which, used aright, may serve as finger-posts to

direct our enquiries, but which also may lead us astray if too hastily we jump to conclusions. The face then we examine naturally, and almost without consciously turning our attention upon it, and the importance of so doing is so obvious that further comment on the point is superfluous.

But the face is not the only portion of the anatomy deserving of scrutiny; and what I wish to point out is, that a routine examination of the hands in all cases will well repay the slight extra labour involved, and will, after a time, be made almost as quickly and unconsciously as the glance at the face.

The basis of all the remarks to follow is the axiom "that in all our tissues there is no such thing as a *perfect* elasticity," and that consequently every muscular action, nay every passing thought, leaves some mark behind in our body generally, some slight track in the labyrinth of our brain-paths. The mark may not be appreciable—if not repeated; it may be apparently effaced by the myriad contrary impressions that follow, but even so, in some infinitesimal degree it must modify the subsequent impressions; but suppose it be repeated, then in course of time we get an imprint manifest and unmistakable. The facial expression is a case in point. Every passing wave of emotion finds its haunting shadow in the contraction of a few fibres of the ever-busy mesh of facial muscles. Whether the emotion precedes the muscle-contraction, or the muscle-contraction precedes and causes the feeling of emotion, is a point over which psychologists still fight. In any case, oft repeated thoughts, emotions, and contractions "set" the face in certain well-recognised lines of expression. And we of modern days and Anglo-Saxon impassivity, who pride ourselves that our passing thoughts and emotions are hidden by a mask of reserve from the vulgar crowd, do not we, by this very reserve, by this inhibition of muscular action, call forth other muscular actions, and so imprint on our faces some sort of expression after all?

In this respect the hand closely resembles the face. In both cases we find a large number of highly specialised small muscles, in both cases these are in close connection with special sense organs; for what, after all, are the finger-tips but special organs of touch? The remarks then that applied to the face apply,

though perhaps with less force, to the hands. In the one case, by long custom we have learned to read the open page with some degree of ease and certainty; in the other, we are yet as little children stumbling over the alphabet. Perhaps after all, deep hidden in the muddy depths of charlatanism, there may be some pearl of truth in the study of palmistry! Indeed, these minuter scrutinies have already been largely utilised in criminal anthropology. The remarkable persistence of the epidermal lines of the finger-tips, as pointed out by Galton, is made of every-day use in the identification of criminals; while Lombroso has written eloquently of the criminal expression shown by the hands and other parts, just as by the face, though I think that most unbiassed observers will allow that his enthusiasm outruns his discretion.

In the by-path of the foregoing psychological considerations I meant to point the moral that if mental conditions can so affect the configuration of the hands, how much more will actual organic diseases!

Naturally some diseases will affect them more, some less. The latter, for our purposes, are beyond the scope of a short paper like this. All that I propose is, to draw attention to those features that are writ large, so to speak, that are easily to be seen at a glance, and that above all are useful aids in diagnosis.

Now, I do not propose to give a catalogue of all the diseases which affect either solely or largely the hands, but rather to draw attention to their condition in two great groups of diseases: one, the obscure group of which we may take acromegaly as a type; the other, the far more important and numerous group comprised under the heading "Rheumatic," using the word in its widest sense.

There is a general rule, first definitely formulated I believe by Arbuthnot Lane, which applies to the bones of the hands as it does to the skeleton generally. "Deformity is first an exaggerration, and then a fixation, of the normal physiological position of rest." There are, of course, exceptions to this as to every other rule, but in the main it will be found to hold true, and to afford a simple and ready explanation of many apparently fortuitous deformities, and a rule that will enable us to forecast

the direction of those impending. Take for instance curvature of the spine: see how first the weakened column adopts habitually the easy curves of rest, how these curves then become exaggerated, and then gradually fixed and permanent. Take the knee: the easy, restful, relaxed position is semiflexion; the natural end of a severely affected knee is fixation in a *more* than semiflexed position. In the wrist the restful position is midway between flexion and extension; and in a straight position the wrist is generally ankylosed. The ulnar deflection of the hand in chronic rheumatism is well known. Is not the normal position one of slight ulnar deviation? Of course, Nature does not bind herself down to always work according to one simple rule; a thousand other influences are at work complicating the main issue, but all working to a definite conclusion, and all equally capable of scientific analysis. According as we look more closely into the matter, so does the element of chance as a causative factor diminish. Take the worn bones of a man who has long and incessantly toiled at the same trade: we soon come to recognise certain deformities peculiar to certain trades—ankyloses and false joints, erosions and bosses of bone, which we can readily see must necessarily have arisen as a consequence of the habitual assumption of the same position; in fact we can often by the deformities and so-called abnormalities of a skeleton determine the occupation of its erstwhile owner, just as a comparative anatomist may perform the sensational feat of building up an animal from a single bone. In this connection the well known "housemaid's knee," "miner's elbow," and "carpenter's hollowed sternum" will at once flash across the mind.

Arbuthnot Lane has shown how in many, if not in most cases, the changes set down to osteo-arthritis are really due to a traumatic arthritis whose mechanism can be readily worked out on physical laws, and its relation shown to the patient's occupation or to a definite traumatism.

I will now consider the condition of the hands in the various rheumatic diseases, using the term "rheumatic" in its widest sense. The diagnosis between gout, rheumatism, and rheumatoid arthritis is often one of extreme difficulty; and it is here

FIG. 1.
Gout.

FIG. 2.
Rheumatism.

FIG. 3.
Rheumatoid Arthritis.

that the observation of the hands is of the very greatest utility. Fig. 1 is from the cast of a gouty hand which I took from a middle-aged woman some two years ago, and painted from life. It is rather a rare specimen. Actual concretions of urate of soda, even in great masses, are common enough in men, though, with the increased attention paid to personal health and comfort, I think they are tending to become less so year by year; but in women, although men have no monopoly of gout, such concretions are very uncommon, and in looking back through my notes of several hundred hospital cases I find mention of only one other. Of course, with such a hand as that before one, the diagnosis is almost insolently self-assertive; but in less pronounced cases we get a couple of bony-looking nodes at the base of the terminal phalanges, some irregular hyperextension and side-twisting of the fingers, or some thickening and striation of the nails due to impaired metabolism. In this latter connection a patient of mine assures me that with every prolonged attack of gout his finger-nails cease growing, to start growth again after the last effects of the attack have passed off.

Fig. 2 is from one of the casts of some hands kindly lent me by Dr. Preston King. It is fairly typical of the group of diseases which, for want of a better name, we lump together as "chronic rheumatism." Worthy of note in this specimen are the marked ulnar deviation of the fingers and the hyperextended phalanges. In this group the hands are generally symmetrically affected, a most important distinction from the hands of gout, as pointed out in a recent number of the *British Medical Journal* by Dr. Ernest Reynolds. The bosses about the hands are hard and bony, osteo-arthritic in fact, and quite different in their nature from the soft doughy swellings in the delicate cast (Fig. 3) which I took from a young woman with rheumatoid arthritis. In the other cases, except where actual tophaceous deposits were visible, we had to rely rather on probabilities than certainties for diagnosis. In the case represented by Fig. 3, there is no room for probability, it is absolute certainty. There is spindle-swelling of the middle joints of the fingers—those spindle joints would be soft to the touch, semi-elastic, and probably hot, with a slight bluish blush in the skin over them;

the thickened wrist—likewise soft—and the wasted interossei will be noticed. The palm would be cold and wet, the fingers leaden-hued and asphyxiated; perhaps there would be pigment-spots over the dorsum. Lastly, both hands would exhibit the most marked symmetry in their lesions. If left to Nature, the ultimate end of such a hand would approximate very closely in its pathological aspects to the final conditions of the hand affected by chronic rheumatism; both would end in an osteo-arthritic condition characterised by lipping and bossing of bone, erosion, and great deformity. In this stage, which is comparatively painless, the diseases have spent their strength, and both find a common grave in osteo-arthritis.

But though the end of both diseases is pathologically the same, *clinically* they are usually readily to be distinguished. The hand affected by chronic rheumatism may be distorted into all sorts of curious shapes, partly to be explained by the laws already given, partly due to pressure of bony outgrowths or to changes in ligaments and atrophy of supporting muscles. The hand erstwhile in the throes of rheumatoid arthritis may exhibit much the same lesions, due to the same forces at work, but above all, and masking all, is generally to be seen the original deformity—the characteristic swellings, once soft and impressionable, now hard, calcareous, and fixed. Tubercular dactylitis may at first sight closely simulate rheumatoid disease in children; but the spindle-swelling is caused by bone expansion, and is accompanied by suppuration, in both of which points it differs essentially from the latter disease.

The other group, the rarer diseases, I shall dismiss in a few words.

1. Paget's disease (osteitis deformans). The cranium and long bones are the parts usually affected; and though the hands sometimes show changes, these are hardly diagnostic and are very rare.

2. Acromegaly (of Marie). The large size of the hands is due to the excessive development of *all* the tissues. There is no appreciable increase of length, only of width and thickness, earning for the hands the epithets of "battledore" and "spade-like." The wrists are about normal. The nails are somewhat flattened, small, and longitudinally striated.

3. Hypertrophic pulmonary osteo-arthropathy. The carpo-metacarpus, the hand proper, is about normal in size; but the fingers are enormously enlarged, the bulbous terminal phalanges being especially prominent. The nails are curved and striated, reminding one of the beak of a parrot. There is great enlargement of the wrists.

4. Myxœdematous hands may at first sight be mistaken for either 2 or 3; but it will be seen that the skin of the other parts of the body is involved, and it is adherent to the deeper structures.

5. Vaso-motor paralysis of the extremities. A few rare cases have been set down to this cause, and may somewhat resemble the foregoing: the presence of subcutaneous hemorrhages may clear up the diagnosis.

6. The hands may exhibit marked changes in rickets, which in rare cases may simulate some of the former diseases; but an examination of the rest of the body will generally readily afford the data for a diagnosis.

7. In leontiasis ossea (Virchow) the hands may be affected; but for diagnostic purposes the changes are unimportant.

8. Nodosities of the fingers have been noted in connection with dilatation of the stomach.

I do not pretend to have exhaustively treated even one aspect of the subject, and I have left untouched the clubbed fingers of emphysema, abnormal and extra digitation, Dupuytren's contraction, Raynaud's disease in connection with rheumatism, and all the thousand and one things that crowd to one's mind when it is allowed to rest on a subject. I hope that this paper, which is rather of the nature of a sketch than a finished study, will tend to stimulate and systematise observation of these interesting cases.

NOTE ON THE BACILLUS OF RHEUMATOID ARTHRITIS.

As the foregoing paper bears so largely on the question of the differential diagnosis of Rheumatoid Arthritis and the other "rheumatic diseases," it was suggested to me that I should give a short *resumé* of the subject of the Bacillus of Rheumatoid Arthritis, concerning which an article by Dr. Bannatyne, Dr. Blaxall, and myself appeared in the *Lancet* of April 25th. Theories of causation have clustered thick about the name Rheumatoid Arthritis, but hitherto most authorities have been

inclined to look upon it as due to some obscure nervous lesion. It always seemed to me, however, looking at the disease from the clinical standpoint, that it more closely resembled some of the diseases of proved microbic origin such as tubercle, and some two years ago, after much fruitless search, Dr. Bannatyne and I were rewarded by finding a distinctive microbe in the synovia of affected joints. Hitherto, owing to its small size and peculiar staining properties, this had escaped our observation; but on looking back again through our old specimens we frequently came across it. Briefly, our method of procedure was as follows: A drop of fluid, aspirated with aseptic precautions from a distended joint, was stained in thin film on a coverslip, various nutrient media were inoculated at the bedside, and, if sufficient fluid had been obtained, a reserve was set aside in sealed glass tubes for further examination. At first we used fairly strong solutions of fuchsin, floating the coverslip on the warm stain for two or three minutes. By this method the organisms were rapidly and deeply stained, but so also unfortunately was the synovial film; and although thorough washing in water or in very dilute acetic acid removed much of the ground-stain, yet the bacilli themselves were generally decolourised almost as rapidly, so that we were rarely successful in getting satisfactory specimens. Substituting weak solutions of methylene blue for fuchsin, and staining for longer periods, up to five days, we got better results. The organisms were more clearly defined, but seemed distinctly smaller than when stained with fuchsin. So far, however, we have been quite unable to find a distinctive and selective stain. Gram's method entirely fails; and though many stains readily colour the microbe, they are all as readily washed out. After working at the subject for nearly a year, and finding that, although we distinguished the microbe in nearly every rheumatoid joint examined, we were yet unable to secure satisfactory cultures, we came to the conclusion that we could go no further with our somewhat primitive apparatus, and placed the matter in the hands of Dr. Blaxall, of the British Institute of Preventive Medicine, for further investigation. He confirmed our results, obtained cultures, though only after much labour, and observed division of the microbe in the hanging drop; he also detected the bacillus in several specimens of blood that we sent him. A full report of his work will be found in the paper referred to; and I will only give here a short summary of the appearance and life-history of the organism. It is a short bacillus, averaging 2 μ in length by .6 μ in breadth, though both these dimensions are liable to considerable variations dependent upon the maturity of the organism and the staining reagent employed. It is dumb-bell in shape, the connecting bar being exceedingly difficult to stain, and generally remaining invisible, the two stained poles giving the appearance of a diplococcus. (See Fig. 4.) It is non-motile, but exhibits marked oscillatory movements. In the hanging drop

Dr. Blaxall has observed the process of division, and I cannot do better than quote his own description: "The intervening portion lengthens out, the ends appearing to pull against one another energetically, the whole organism oscillating the while

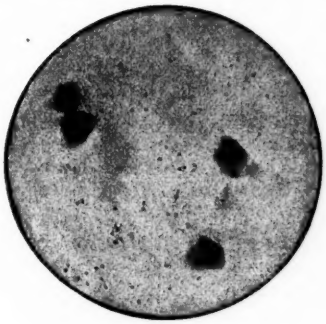


FIG. 4.

Coverslip preparation of synovial fluid from the knee of a patient suffering from Rheumatoid Arthritis.

Stained with Methyl Blue. $\frac{1}{12}$-in. objective, No. 4 eye-piece.

uneasily. The middle part lengthens out more and more, so that the organism appears to be almost twice its ordinary length, then suddenly the link snaps, and the freed ends fly off in contrary directions and are lost amid their fellows."

Cultivation.—In flasks of perfectly clear peptone beef-broth at blood-heat very minute floating colonies appear on the fourth day, scarcely visible and resembling "gold-dust" when the flask is held up to the light. Tubes of sloping nutrient agar-agar inoculated from the beef-broth show on the fourth day a delicate translucent superficial film, much as if one had breathed on a polished surface. A similar growth will occur on blood-serum, but is more difficult to discern.

The following conclusions have been arrived at:

(1) This organism has been found in the synovial fluid in 24 out of 25 cases examined.

(2) It has also been seen in the blood in a few instances.

(3) It is constant in appearance, and exhibits marked peculiarities of growth.

(4) It has not been found in synovitis due to other causes, though organisms morphologically somewhat similar have undoubtedly been noted.

For these reasons, although the crucial test of animal inoculation has not yet been fully worked out, there would seem little reason to doubt that this bacillus is the true cause of rheumatoid arthritis.

INDUCED PREMATURE LABOUR IN CERTAIN DISEASES OF THE MOTHER NOT OBSTRUCTING DELIVERY.

BY

J. G. SWAYNE, M.D. Lond.,

Emeritus Professor of Midwifery, University College, Bristol; Consulting Physician-Accoucheur, Bristol General Hospital.

(Continued from page 9.)

THE next to obstinate vomiting as regards frequency and danger to both mother and child is albuminuria arising from imperfect action of the kidneys, and sometimes complicated by a failure of other excretory organs. Of this kind I have met with four instances. The most dangerous proved to be one in which albuminuria was complicated with jaundice, for in this case both mother and child perished. In the three others all the mothers did well, but two out of the three children died. Before describing these cases I may quote some remarks made by Dr. Barnes, which have a very important bearing on their cause. He says: "At the outset of the discussion we must recognise the fact that the struggle is at first strictly physiological. Let us, then, in the first place, observe the phenomena evoked by pregnancy. The most remarkable are the marvellous exaltation of nervous and vascular tension, and attending alterations in the qualities and quantity of the blood. From the moment that the embryo takes possession of the woman every drop of blood, every fibre, every organ is affected, the entire system is working under high pressure. It is our business to watch narrowly to see how far she is able to bear the strain and to be prepared with means to help her in preserving or in restoring the just equilibrium. Failing in that we endeavour to relieve the overstrained organism by removing the cause of the disturbance, that is to remove the embryo by the induction of labour." [1]

[1] *Brit. M. J.*, 1894, ii. 1419.

These remarks by Dr. Barnes are singularly applicable to the cases I am now about to describe. I will begin with that of albuminuria without other complications.

CASE 6.—On May 8th, 1867, Dr. Brittan requested my advice respecting Mrs. F., living in Clifton, who was in the eighth month of her first pregnancy. She was suffering from anasarca arising from albuminuria, for her urine when analysed contained a large amount of albumen. She had also experienced some symptoms of cerebral disturbance, which we considered premonitory of puerperal convulsions. We could not detect any fœtal movements or heart sounds. After consulting we determined to induce labour on the day following. Accordingly, at 10 a.m. on May 9th, I introduced through the speculum a sea-tangle tent into the os uteri, and then plugged the vagina. I removed the tent about 9 p.m. the same evening, and passed a sponge tent of larger size and gave ʒi. of ext. ergot. liquid. in three doses at intervals of an hour. On calling in the afternoon of the next day I found that the os uteri was dilated enough to admit the forefinger, and that some liquor amnii had escaped, but there were as yet no labour pains. Labour, however, came on during the morning of the following day, May 11th, and she soon gave birth to a living female child of fully seven months development. The albuminuria soon began to lessen after the labour, but there was, for several days, some degree of dyspnœa from hydrothorax. The child did very well, and so did the mother ultimately. Thus terminated this most satisfactory case, after an induced labour lasting about forty-eight hours.

The next case, however, is widely different, and not uncomplicated.

CASE 7.—On February 11th, 1873, I induced premature labour in Mrs. G., a patient of Dr. Marshall's living in Clifton. He consulted me about her because she had borne only one healthy child at the full term, and five others prematurely, the placenta being always diseased and unusually large. Her health had suffered much during pregnancy, and she had once been jaundiced. When I saw her she was about seven months pregnant. Her urine contained much bile, and occasionally albumen. The uterus was very large and pressed up very much on the stomach and liver. No fœtal heart could be heard, and she had felt no fœtal movements for some days. A slight placental *bruit* was just audible on the left side. Her health seemed so seriously affected by the pregnancy that we determined to bring on premature labour, both on her account and also to save the child, which was evidently becoming very feeble. I therefore introduced a sponge tent on February 9th, 1873, at 10 a.m. This one was removed and a larger one introduced at 10 p.m. There had been slight pains in the interval. The second sponge tent was removed on Monday, the 10th, and a third and larger one passed, which was removed on the morning of Tuesday, the 11th. Slight cutting pains had been experienced for the last two days, and to induce stronger ones ʒi. of ergot was given in two doses. On the evening of that day strong pains had set in, the membranes had ruptured, and the head presented. It was a brow presentation, for the right frontal bone presented with the face towards the right acetabulum. The head felt soft and puffy. By putting my finger into the mouth I brought down the face under the pubic arch. Notwithstanding this the head remained a long time nearly touching the perineum. The pains were feeble, and her general condition rather prostrate.

After a considerable interval the child was expelled. It was universally puffy and œdematous, and the abdomen was distended with ascitic fluid. There was slight pulsation in the cord, but no respiration could be induced. After waiting about half an hour, and finding that the placenta would not come away, I introduced my hand, and found the uterus in a state of hour-glass contraction. The placenta, which was soft and spongy, appeared to be of unusual size, and filled the entire cavity of the uterus above the constriction. In order to detach it I had to pass my hand quite up under the ribs. I found one portion firmly adherent, so that I had to separate it with my nails. I did this with some difficulty, and at last brought away the entire mass, which was found to weigh 2¾lbs. It appeared œdematous, and was of a light buff colour, like one undergoing fatty degeneration. The detachment of the placenta occasioned very little hemorrhage. After delivery Mrs. G. remained in a state of great prostration. The pulse had risen to 140, and much nausea set in. The urine also contained much bile and albumen. She remained in the same low condition, with no sign of rallying, until Friday, February 14th, when she gradually sank, exactly three days after the confinement.

On reviewing the history of this strange and singular case, I cannot but regard it as a very forcible example of the propriety of closely watching Nature under such circumstances, and closely observing how she acts. As Dr. Barnes remarks, "*Natura ostendit viam*," and then he adds: "When seeking to determine the indications for bringing pregnancy to an end, the first source of light will rightly be sought in the observation of the conditions under which Nature herself seeks relief by adopting this course, and the evils incurred if this mode of escape or relief be missed." These words exactly apply to the case before us—a woman who had borne one healthy child, from some cause or other falls into a morbid and unhealthy condition during five succeeding pregnancies, and Nature expels a morbid child and a morbid and preternaturally enlarged placenta before the child is viable, but in time to save the life of the mother. On the next pregnancy, however, Nature is, for some reason, less active in her efforts to get rid of the offending cause, and allows the child to develop up to the age of viability, with the result that both mother and child are lost—the former through extreme exhaustion, aggravated by a most unfavourable labour. Should I ever be consulted in a similar case again, I certainly should advise inducing premature labour before the uterus has risen above the umbilicus, leaving the viability of a probably diseased child altogether out of the question.

CASE No. 8.—On September 22nd, 1873, Mr. H. requested me to see his wife with a view to the induction of premature labour. He was a medical practitioner, and told me that his wife, whom I had never seen before, was a multipara, and had in a former pregnancy albuminuria, followed by severe convulsions, so that she nearly lost her life. On this occasion the albuminuria had lasted many days. I found that the albuminous deposit in the test tube formed about four-fifths of the whole quantity of urine. Her face, and also her legs, were very œdematous. She had just completed her eighth month of pregnancy. As it was a clear case for inducing labour without delay, I passed, on September 22nd, 1873, a large tangle tent into the os uteri. This I removed next morning, and was able to insert a large sponge tent. On the next morning (September 24th) I found that she had had several pains during the night. I removed the tent and found that the os was dilated to about the size of a florin, and that the head was presenting. I then punctured the membranes with a stiletted catheter, and drew off a considerable amount of liquor amnii. Labour then came on vigorously, and about 4.45 p.m. she gave birth to a living female child. It cried vigorously at first, but soon became feeble and cold, and died about six hours afterwards. The albuminuria gradually disappeared in a few days after delivery, and the mother made a good recovery.

There is no further comment to make on this case, which would have been a very successful one but for the feeble vitality of the child.

CASE 9.—On February 20th, 1877, Mr. Ruddock requested me to see Mrs. I., living at Redland, a primipara who had for some time been under treatment by Mr. Teale, at Leeds, for amaurosis caused by albuminuria. She was very nearly eight months pregnant, and for some weeks had often had as much as 50 per cent. of albumen in the urine. There was also slight dropsy of the lower extremities, with frequent severe pains in the head, and almost total loss of sight. She had not felt the fœtal movements for some weeks, and I could detect no heart sounds or placental *bruit*. On consultation we decided to bring on labour at once. I therefore at 8 p.m., February 20th, proceeded to do so by passing a bougie for about three-quarters of its length between the uterus and membranes, and leaving it there. I saw her the next day at 10.30 a.m. She had passed a good night without pains, but there had been some show, and on withdrawing the bougie I found the os uteri dilated enough to admit the point of the index finger, and I could feel the head covered by the membranes. I then introduced a sponge tent about the size of the index finger. Labour pains set in about an hour after this, and continued until Mr. Ruddock saw her, about 6 p.m. The os was then dilated to the size of a crown, and the membranes presenting. These soon gave way, and the labour ended about 8.30 p.m. The presentation was natural. The child was much decomposed, and had apparently been dead for some weeks. As regards her labour the patient made a good recovery; but in consequence of her leaving Bristol soon afterwards, Mr. Ruddock could give me no information as to any improvement in her vision.

I regret very much that I was not called in to her earlier, so that I might have at once induced premature labour as soon as symptoms of fœtal death were present, as, according to the best authorities in ophthalmic surgery, the induction of labour is the

one thing needful to cause improvement of vision in most of these cases, provided there be no organic disease of the kidneys.

I will now relate two cases in which I had to bring on labour on account of great distension of the abdomen, caused by an undue amount of liquor amnii, constituting the diseased condition called hydramnios.

CASE 10.—On February 5th, 1875, I was requested to see (in consultation with Mr. Lucy) Mrs. J., living opposite the Clifton College. She was a multipara who had previously had good confinements. By her reckoning she was just seven months pregnant, and I was asked to see her on account of very great œdema of the labia. They were now enormously distended, and so painful that she could scarcely sit down. The legs also were œdematous. On examining the abdomen I found the uterus more distended than it should have been at full term; and I could hear neither fœtal heart nor placenta *bruit*, and could feel no movements. She said she herself had felt none for some days. On making a vaginal examination I could just pass the tip of the finger through the os uteri and feel the tense bag of the membranes. The urine when examined was found to be highly albuminous. There could be no doubt that the case was one of hydramnios, and that the child was probably dead. To relieve the tension of the labia I made several punctures with a fine needle, and a large amount of fluid drained away. We both agreed that it would be advisable to bring on labour. On calling during the next day I found that she had had slight pains after we left, and that the os uteri was dilated to the size of a shilling. I therefore punctured the membranes with a stilette and drew off five pints of fluid. Pains then came on rapidly, and the child was born within an hour. It presented rightly, was a well formed female infant, and weighed 3 lbs. 4 oz. The heart pulsated feebly for a few seconds and then ceased. There was no respiratory effort. After the birth of the child as much more fluid escaped into the bed as had been already collected. The mother did very well.

The next case of this kind was very similar. It was as follows:—

CASE 11.—On July 14th, 1883, I induced premature labour in Mrs. K., living in Clifton. She was in her eighth month of pregnancy, and had borne nine children previously. The last of these was born nine years before. I had seen her two days before in consultation with my colleague, Mr. W. Michell Clarke. He then told me that she had symptoms of pregnancy, such as quickening followed by fœtal movements, &c. He had also heard the fœtal heart; but these symptoms had passed off, and latterly she had greatly increased in size. I found that the uterus was large and globular, and of greater size than it would be at full term, and gave a distinct fluctuation. No movements could be felt, or fœtal heart or uterine *souffle* heard. On examining *per vaginam* I could introduce my forefinger through the os uteri and feel the membranes and head of the child. We both regarded it as a case of hydramnios, that the child was probably dead, and that the sooner labour was brought on the better, because the patient was nearly worn out with sleepless nights and pains in various parts of the abdomen. Accordingly, about 10 p.m. July 13th, I introduced an

elastic catheter between the uterus and membranes, and left it until 10.0 a.m. the next day. I found then that it had caused slight pain and trifling dilatation of the os. I therefore withdrew it and introduced a full-sized sponge tent. This I left until 3 p.m., when I removed it. The labour pains were then more decided, and the os uteri dilated to the size of a half-crown. I then withdrew the tent and punctured the membranes with Barnes's tent introducer, having previously applied a binder and given ʒi. of ext. ergot. liquid. There was a great gush of liquor amnii, and enough water was expelled to fill a chamber utensil, besides much that was lost. Labour then went on more briskly until the head had come down on the perineum. Here it remained immovable for some time; I therefore applied Simpson's short forceps, and soon delivered her of a still-born female child as large as one would be at full term. The child had evidently been dead for some days, as all the skin had peeled off. Some more ergot was given just before delivery. There was no *post-partum* hemorrhage, and the patient did very well.

In the two cases which have just been described the abnormal condition of pregnancy produced so much distress and inconvenience to the mother, owing to over-distension of the uterus, that it became necessary to deliver without delay. There was no need in either case to wait for the viability of the child, for all signs of its vitality had ceased, so that when it was born it appeared to have been dead for many days; and therefore the mother's life alone was to be considered. It is not quite decided whether the diseased condition producing hydramnios originates with the mother or the child, or perhaps both. For instance, a syphilitic taint may affect both, but more especially the child, and the death of the child is thus a frequent accompaniment of hydramnios. Albuminuria, if present (as in Case 10), or diabetes, would seem to show that a morbid condition of the mother is the primary cause. The greater frequency, however, of hydramnios in twin cases and with female children (as in both my cases) would seem to show that a feeble state of the child is a frequent cause. In my other case (Case 11) the fact that the mother, after bearing many children, bore no more for nine years, until after that time, just before the menopause, she again became pregnant, had hydramnios and gave birth to a dead child, would seem to favour this idea.

The next case I have to relate occurred early in pregnancy, and is rather a case of protracted abortion attended with so much hemorrhage as to endanger the life of the woman, and

render it necessary to induce the expulsion of the fœtus and thus cut short the pregnancy.

CASE 12.—On August 21st, 1876, I was sent for to see Mrs. L., a multipara, living in Clifton, who was nearly five months pregnant. For five weeks she had almost daily hemorrhage from threatened abortion, which had resisted all treatment and had gradually reduced her strength to the lowest point. The os was slightly open, but the membranes could not be reached. Feeling confident that the child was dead, and fearing any further reduction of the mother's strength, I determined to bring on labour. About 10 p.m. I introduced a medium-sized tangle tent. I was sent for about 6 the next morning, because she had experienced some labour pains and also more hemorrhage. I removed the tent and found the os uteri partly dilated. I then introduced a full-sized tent. I called at 3 p.m. on that afternoon and removed the last tent. The os was well dilated, there were regular pains, and the membranes were protruding. I was again sent for about 5 p.m., and when I arrived I found that both the child and placenta had been expelled. The child, from its appearance, must have been dead for two or three days. The mother made a very good recovery.

The case just related accords with my experience of impending abortion during the first half of utero-gestation, which is, that if pain, hemorrhage, and other symptoms of abortion cannot be checked by extreme quiet, rest, and sedatives during the first week, it is generally useless to persevere with these measures any longer; for Nature is evidently bent on getting rid of the offending cause, which may be either diseased membranes, a partially detached or misplaced placenta, or a dead fœtus. A woman who is kept in the recumbent posture under these circumstances, and allowed to bleed slowly every day for weeks, will ultimately die from loss of blood unless the fœtus be expelled by the natural efforts or by the assistance of Art.

The last case I have to mention is a curious and anomalous one, and also very unusual. It is as follows:

CASE 13.—Mrs. M., living at Kingsdown, Bristol, consulted me, on account of intense irritability of the bladder towards the latter part of pregnancy. She was confined at her full time about fourteen months previously to this labour, and suffered a good deal from the same affection towards the end of her pregnancy, but still nothing in comparison to that of the present time. The dysuria was much aggravated by taking food or drink. Sedatives of every kind, both local and general, were tried, but with very little relief, until at last her condition became most critical. She was disturbed every hour in the night to pass water, and the suffering and want of rest thus produced at last caused extreme emaciation, great irritability of the stomach, and even slight symptoms of mental aberration. From her reckoning, which was somewhat doubtful, because she could not be sure of the date of her last menstruation, I considered her to be about seven months preg-

nant. Although reluctant to induce labour so early, yet I dreaded the results of further delay, and on January 18th, 1875, about mid-day, passed an elastic bougie about eight inches between the uterus and membranes, and, coiling up the end, left it in the vagina. On the next day I saw her at 12, and removed it. There had been slight pains about once every hour since the day before, and the os uteri would just admit the point of the index finger. I then introduced a full-sized sponge tent. I was called up to her during the night. I found that she had had strong pains, and that the os was nearly fully dilated. The membranes were soon ruptured, and the child was born at 3.15 a.m. It was a male, and weighed 3 lbs. 1 oz. and measured 15 inches in length. Although it breathed well and cried strongly, it lived only twenty-four hours. The mother did well.

Dr. Barnes, at the end of his discussion, remarked very justly that "the rule urged by Denman not to undertake the induction of labour or abortion without a formal and deliberate consultation is imperative." Fully agreeing as I do with this remark, I must confess that in these two last cases I acted without a previous consultation, and therefore feel bound to excuse myself for so doing. The fact was, that in neither case did I feel conscious of sacrificing the infant's life in order to save that of the mother. In the first case, I felt certain that the child was already dead, and this was proved by its appearance when born; in the second, I felt sure that the child had become viable, for there had been no previous signs of its death, and its size and apparent vigour when born, especially as regards respiration, made us think that I was right in my opinion as to its viability. But in this I was doomed, after it had lived a short time, to be disappointed. The state of the mother, however, was such that I dared not defer the operation any longer. This was very disappointing, for most probably, had the condition of the mother permitted it, an extra fortnight might have made all the difference in favour of the child.

I have now mentioned all the diseased conditions of the mother which rendered it necessary for her safety (sometimes quite irrespectively of that of the child) that I should cut short the pregnancy.

There are other diseases besides those mentioned—such, for instance, as heart-disease, aneurysm, fibroid or ovarian tumours, phthisis, pernicious anæmia, &c.—but I have no record of any cases of this kind complicating pregnancy;

although they are very rare, they have occurred in the practice of others, and have required artificial delivery.

In the course of my midwifery practice I have had to induce premature labour in twenty-four cases on account of *pelvic obstruction*. I shall say no more about these now, except to speak of the safety of induced labour under such circumstances, compared with that under such as I have already related. As regards the mother, there is no doubt that the operation is incomparably safer when undertaken on account of pelvic obstruction than when done to obviate the results of disease.

In the first of these two classes—viz., the twenty-four cases operated upon on account of pelvic malformation—there was only one maternal death, and that arose from a very unusual cause; viz., ruptured uterus arising from an arm presentation, in which the child was spontaneously expelled in a doubled-up condition.

In the second class—viz., the thirteen cases I have already related—there were three maternal deaths. The first of these resulted from most obstinate vomiting just before full term, when, in hope that natural labour might occur daily, induction was probably delayed too long. In the second, the placenta was much diseased, and the mother suffering from jaundice and anasarca, as well as albuminuria. In the third, the intense vomiting which destroyed life evidently arose from hard drinking habits, to which the patient had given way not long before she became pregnant.

The causes why there should be such a great difference between these two classes as regards the safety of the mother are very obvious. As Spiegelberg remarks: "The operation is either a prophylactic measure, or else a rapid means of rescue from danger." As I have shown, it is prophylactic when there is mechanical disproportion, as in the first class, and can be performed under the most favourable circumstances; the woman is in her usual health, the operation is deliberately performed and at a carefully chosen time. Hence in my own twenty-four cases there would have been no maternal death, if we exclude the one unusual case. If we admit it however, the mortality would be no more than 4¼ per cent.; whereas in the second

class of cases the operation, as Spiegelberg remarks, is a means of rapid rescue when the mother is suffering from dangerous disease, and it consequently has to be performed at the most critical moments, when we cannot choose our own time, when she is, perhaps, *in extremis*, and under the most disadvantageous circumstances, both for her and the child. Hence, in my own list of thirteen such cases there were three maternal deaths, or about 24 per cent. mortality. The causes I have just mentioned would also add to the comparative danger of the child, but not to so marked a degree. However, I cannot enter upon this at present. Towards the end of his address, Dr. Barnes spoke very strongly of the danger of high vascular tension "with ultra-physiological changes in the qualities and quantities of the blood. . . . This is demonstrated by quickened pulse and the indications given by the sphygmograph. This pressure is essentially eccentric or towards the periphery." And then he gives instances of external hemorrhages or effusions of serum thus produced, and adds the following excellent remarks as to treatment, which my own experience thoroughly endorses. He says: "Venesection is sometimes strongly indicated, as when hæmorrhages occur, and when there is undue pressure on the kidneys, as in Mahomed's pre-albuminuric stage, or in the early stages of albuminuria with convulsion. Venesection is out of date, but I have practised it with the best results. Then in the last resource we follow Nature's most decisive action in her rebellion against pregnancy by inducing labour." With such testimony as this in its favour we may well ask, Why should venesection be "out of date?" I never could find any good reason why it should be, especially in cases of great arterial tension, and I can quote, on the contrary, a case which conclusively proves that any practitioner is guilty of neglect who in *every* case at once adopts "the last resource," viz., the induction of labour, without first trying so valuable a remedy as venesection. I can quote a case of this kind which occurred to my brother, Mr. S. Henry Swayne, and which was read by him at the meeting of the British Medical Association in Bristol in 1863. It was to this effect: A woman in the seventh month of pregnancy was attacked with puerperal convulsions, for which

blisters, cold to the head, purgatives and enemata were administered without effect. The urine, on being examined, contained so large a quantity of albumen that the deposit formed by it occupied about $\frac{5}{6}$ of the whole bulk of the fluid examined. She was bled on the next day to ℥xxv. No more convulsions occurred. Some urine, passed within twenty-four hours after the bleeding, was examined, and the albumen was found to occupy only $\frac{1}{6}$ of the whole volume after subsidence. Although the fœtus appeared to be dead, no attempt was made to deliver, because there was no dilatation of the os uteri. The woman went on well for twelve days, when labour set in and terminated favourably, without convulsions, in the birth of a dead child, somewhat decomposed. My brother remarked: "No other exciting cause for the convulsions in this case beyond the uræmia could be discovered; and that the presence of the fœtus in utero had little share in bringing them on or maintaining them, would seem to be shown by the cessation of the convulsions and of the albuminuria, notwithstanding the presence of a dead child in the uterus . . . for a fortnight after. . . . That the improvement was due to the measures employed, especially to the bleeding, can, I think, scarcely admit of a doubt."[1] With this remark I entirely agree, for it was a most conclusive case. I cannot understand how such cases can be ignored by men who contend, as many do in the present day, that induced labour is the one thing needful in cases of persistent albuminuria, even to the extent of having recourse to the "accouchement forcé"—a mode of practice strongly reprobated by such high authorities as Charpentier and others of the French school. In the discussion which ensued after Dr. Barnes's introduction, Professor Byers of Belfast remarked very truly: "As to the presence of albumen, this in itself should not in all cases be considered an indication for terminating pregnancy." The case I have just quoted fully confirms this opinion.

[1] *Brit. M. J.*, 1863, i. 648.

CHLOROFORM OR ETHER?

BY

JOHN FREEMAN, F.R.C.S. Ed.,

Anæsthetist to the Bristol General Hospital.

THE question of which is the best and safest general anæsthetic continues to be constantly brought under the notice of the profession by the frequent occurrence of deaths during anæsthesia. The fact that opinions are still so divided shows that a good deal can be said in favour of both chloroform and ether; but one thing stands out pre-eminently, and that is, that when deaths do occur they are nearly always when chloroform has been used. It is also fairly evident that, so far, experiments on animals have not helped us much in coming to a right conclusion as to the safest anæsthetic to use for the human subject.

Chloroform.—One of the great advantages of this agent, and I believe reasons, speaking generally, why so largely used, is the very simple way in which it can be given even by one who has had very little experience in anæthetics. It is also fairly pleasant for the patient to inhale, and in the great majority of cases it answers the purpose admirably; but these advantages are counteracted by the treacherous way it acts in some instances.

A few of the deaths reported lately are good illustrations of the different ways in which chloroform appears to kill. Some of the patients were obviously not fully under the anæsthetic, as they were said to have "struggled, evidently feeling the pain," and immediately afterwards the heart and respiration stopped. Others in going under struggled violently and suddenly died. Another died just after he had been lifted from one place to another; while another succumbed apparently because the chloroform was administered to him whilst he was sitting upright.

It is not my intention to attempt to criticise the method in which the anæsthetic was given in these cases, because I think the whole circumstances should be taken into account. For

instance, the nature of the operation may demand that the patient's head be raised; or it may be quite necessary to lift him from one place to another. There is one point I should like to touch upon in connection with these cases, and it is, that in those cases which died after struggling, it is almost invariably suggested that they died from an overdose of chloroform brought about by the inhalation of a large quantity of the anæsthetic in the deep inspirations that occurred between and after the acts of struggling. To say this in any case is to throw considerable blame upon the anæsthetist, as it means that he gave the chloroform in an unscientific if not a reckless manner. That it is possible for a patient to take an overdose in this way no one is likely to deny; but that it is the probable cause of death is, I think, very doubtful. These deaths from struggling have happened in the hands of experienced anæsthetists who must have been well aware of the fact that any rash pushing of the drug at this stage was particularly dangerous, and there is very little doubt they took every care that no chance of overdose was given.

There is another way of explaining these cases. When a patient struggles he always holds his breath, and it is generally understood that any obstruction to breathing, whether the chloroform is being given at that particular moment or not, is very likely to impede the heart in its action. If the breath is held for any length of time the pulmonary circulation and the right side of the heart become engorged, and in this way the heart's action is interfered with. The heart thus working under difficulties, now has another strain thrown upon it by the violent exertions of the struggling patient. It has been noticed many times that the heart will stand very little extra work in some patients during the inhalation of chloroform. The mere lifting of the patient from place to place, or sitting him upright, have been sufficient to cause death even when the respiration had been apparently good; but in these cases the respiration is embarrassed and the heart is already weakened by the over-distended condition of its right side.

Why then, since we have two well-recognised dangerous conditions present, each of which has in several cases produced

death, must we bring in another cause, viz. the overdose theory, before we can satisfactorily explain these accidents? This overdose theory has far-reaching results, and it is quite possible that it is accountable for some of the deaths that occur in other ways. One not unfrequently hears of half an hour or more being taken to get a patient under with chloroform. All statistics show that the going-under period is one of the most dangerous; anyone, therefore, who unduly prolongs this period must subject his patient to unnecessary danger, and this is brought about by the fear of giving an overdose. The same sort of idea is shown again in those cases which die apparently from syncope, through the operation having been commenced before the patient was sufficiently under. Hence, we read of the patient "moving, evidently feeling the pain," or again, "the corneal reflex was present." All such cases as these seem to show that the administrators of the chloroform wanted to prove that the patients did not have an overdose. Dr. Hewitt, in his book on anæsthetics, says "there is about as much risk from administering too little as from administering too much chloroform," and the reports of these cases appear to point to the correctness of his view. Again, if most of the deaths under chloroform are due to overdose, as some seem to think, how is it that accidents happened with those who used inhalers that measured the chloroform vapour given to the patient? and why is it that most of the fatalities did not occur in the practice of those who make a rule of using large quantities of chloroform in their administrations? For instance, one celebrated anæsthetist thinks nothing of using as much as two ounces for a small operation which can only last a few minutes. Have we to go to such as these to find the majority of fatalities? It is more common to read of death taking place after only a small quantity of chloroform has been used. One case was lately recorded where the patient died from half a drachm. In two cases it was noticed that the heart stopped before the respirations, and several others read as though death was due to primary cardiac syncope. Chloroform, in some patients at any rate, appears to put the heart into a condition of instability—that is, in this state its action is affected and may be stopped by circumstances which at no other time have such

influence on it. Hence, interfered respiration, the act of vomiting, the feeling of pain, &c., have all in their turn brought the heart to a standstill.

The large number of deaths that have happened lately in children shows that chloroform is not such a safe anæsthetic for them as was once thought.

Since deaths are so frequent under chloroform, the question ought to be considered whether we are quite justified in employing this agent. It is true the chance of an accident happening in any particular administration is very small; but there is no doubt that in all those cases that ended fatally the anæsthetists thought the same thing, and probably some of them told the patients as much. There are some who, because they have given chloroform a great many times without any accident, have come to look upon it as a safe agent; but whilst they have had good luck, others quite as experienced have not been so fortunate: besides, as only a small proportion of patients die in this way, many anæsthetists will chance to have a large experience without a death. But at the same time, since we have no means of telling which patient will take chloroform well, and which one will die from it—a strong, healthy man being just as likely to fail as a weak one,—it is doubtful whether we are doing the best for the patient when we proceed to give this anæsthetic, unless there is some special reason why it should be the one selected.

Ether.—This anæsthetic appears to be becoming more generally employed every year. There are several reasons why it is not used more. It requires an apparatus for its administration. Some might say this ought not to be a reason; but still, one may be called suddenly to give an anæsthetic where there is no ether apparatus, so chloroform has to be resorted to. Another reason is, that ether is a little difficult to give. While one who has never administered an anæsthetic before will be able to get a patient under fairly easily with chloroform, this is not usually the case with ether. Great difficulties may be met with by the beginner, and with a strong patient there would very likely be failure. Ether is not pleasant for the patient to take, and it is said not to relax muscles sufficiently in some cases. The most

important objection, however, and the one which chloroform advocates use against it, is in its after-effects, particularly in regard to affections of the air-passages. These points about ether are worth some consideration. The difficulties connected with its administration are to a great extent preventable: it can be given in such a way that thirty or forty cases in succession will take it without there being struggling or any other difficulty; and when one sees a very muscular man go under without moving so much as a finger, as is frequently the case, it is difficult to believe that he is experiencing any very great discomfort. The causes of struggling, &c., are sometimes fairly obvious and may be due to too strong a vapour being presented to the patient at the commencement of the administration. The patient finding it impossible to breathe this, although he may try his utmost, naturally begins to struggle for breath. Another cause is, that the ether is sometimes commenced when the bag is only half full of air, and some that is in it will very likely be allowed to escape, through the face-piece not being applied properly, so in a minute or so the bag is empty. The patient tries to take an inspiration, when the bag collapses, as there was so little in it. Under such circumstances, is it surprising that the patient, finding he cannot get any air to breathe, should struggle? Again, giving too much fresh air at an early stage of the administration is a frequent cause of struggling. You may see a patient begin to take ether perfectly, and he may have got to the stage where consciousness is just being lost, the breathing being rapid and forcibly expanding the air-bag at each expiration. Should at this period the anæsthetist unguardedly allow two or three breaths of fresh air, trouble may be expected. A small quantity of fresh air at this stage will restore the patient's consciousness, and bring back sensitiveness to his air-passages. On the inhaler being re-applied, the patient instantly holds his breath, he feels and realises the pungency of the now somewhat strong ether vapour, and struggling, vomiting, and other troubles rapidly follow each other.

Such points as these make all the difference to the sensation experienced by the patient, and very little practice will prevent those who are learning to give anæsthetics from making such

mistakes. This is why I hold that students should have the opportunity given them of learning to administer ether. When they get into practice they can please themselves whether they precede the ether with nitrous oxide, or use a little A.C.E. mixture until the patient is becoming unconscious. These are only details: the important thing is, that they will feel capable of administering properly what in future will most likely be considered the safest anæsthetic. I do not agree with those who say that ether will not sufficiently relax muscles for some operations. I believe that continued rigidity of the muscular system depends much more upon how the ether is administered than upon any peculiar idiosyncrasy of the patient, and I never meet with cases in which I cannot for all practical purposes completely relax the muscles. All patients, in going under with ether, pass through a stage in which there is more or less rigidity. This passes off in most patients in a minute or two, but there are two classes of individuals—the alcoholic, and the very muscular—in which this may not happen. These remain rigid for some time; and you may have the ether on full, and limit the supply of fresh air to a large extent, and yet the spasm continues. These are exceptional cases and they require different handling, but it is a mistake to think that nothing more can be done to get them under. The appearance of the patient in this condition gives one the key to the difficulty. The muscular spasm is a general one, and so the muscles of respiration are included. The result of this is, that the patient becomes deeply cyanosed. On giving a plentiful supply of fresh air to remove this cyanosis, one notices at the same time that the muscles begin to lose their rigidity; so in these cases, when I find, after a good trial of ether, that the muscles do not relax, I remove the inhaler altogether, and let the patient have fresh air until his normal colour returns and the rigidity begins to subside. Of course, this procedure brings the patient half round from his anæsthesia, and his reflexes become active again, so on re-applying the inhaler it is very necessary to begin with a weak vapour; a strong one, by causing holding of breath, &c., would bring back all the rigidity in a very short time. I have not met with a case yet which failed to go under completely on this second attempt, but necessarily the

time taken to get one of these patients under is much longer than in an ordinary case.

With regard to the after-effects of ether, there are only two worth considering. The first is vomiting. In comparing the vomiting that takes place after ether with that of chloroform, so far as I have been able to observe, there is very little difference between the two. More patients vomit after ether than after chloroform, but the ether vomiting generally passes off more quickly. That long-continued vomiting, going on into the second or third day, which now and then follows chloroform is very rare after ether.

Now we come to the chief objection to ether as an anæsthetic; viz. that it sometimes produces affections of the air-passages: were it not for the possibility that ether may indirectly cause death in this way, chloroform would have been doomed long ago. Unfortunately, it is impossible to speak definitely about this point, because there may be other causes to produce these troubles at the time of an operation besides the ether. I have made enquiries on this subject from those of experience, and the general opinion is that chest affections resulting from ether are extremely rare. Dr. Hewitt, in dealing with this subject, says "there has undoubtedly been gross exaggeration." My own experience is a little interesting. In 1600 administrations of ether to patients of all ages, from 6 weeks up to 80 years, (many of them, too, were in long operations lasting two or three hours), I have met with one patient who had some bronchitis after. This was a woman aged 23, who, however, made a good recovery. The anæsthetic received all the blame; but I have also had a case in which bronchitis followed an operation in which chloroform was the anæsthetic. In this case, however, the bronchitis was looked upon as a sort of coincidence, or perhaps due to the exposure of the patient during the operation (one can make a very good guess as to what would have been thought if ether had been used in this instance). One other case I have met with gives a good illustration of how easy it is to blame ether for what it does not deserve. It was a child six years old. Its nurse had not noticed anything the matter with it, and there was nothing definitely wrong with the chest. I used A.C.E. mixture, and in

going under the child coughed several times which made the operator remark "the ether was making the child cough a good deal." For some days afterwards the cough was very troublesome, and was still supposed to be due to the "irritation of the ether;" but on the sixth day after the operation the child developed a characteristic "whoop" with its cough, and after this it went through the ordinary course of whooping cough. Ether has been given at this hospital, by others, many hundred times without there being any other case in which it was suspected to have caused any chest trouble.

From such experience as I have had of these two anæsthetics, I cannot help thinking that a patient is in a much safer condition under ether than under chloroform. With ether, so long as the patient is kept sufficiently under to prevent holding of breath, vomiting, etc., there is no trouble, and one can depend upon having a good warning if the patient is not quite satisfactory. Up to the present time, no patient under ether has ever given me the least anxiety. I cannot say this of chloroform. Sometimes with a cause such as putting a gag into the mouth, or placing the strap of Clover's crutch round the back of the neck, and sometimes without any obvious reason, I have had patients who were in a condition of considerable danger. Because of this, I now make a rule of always using ether, unless there is some reason for its contraindication.

Sir B. W. Richardson, in a recent article on chloroform deaths, writes: "There are certain persons, say about 1 in 3000, who at all times are ready to die." He has designated them "the morituri," and says they are the common victims of chloroform. If this is the real explanation of these deaths, it is one more reason why ether should be used, because whilst chloroform is constantly finding out these cases, ether scarcely ever does so. If, as statistics often show, in 10,000 administrations of chloroform four such deaths occur, and in the same number of ether cases no such accident happens, there must be some very important difference between these two drugs.

I think we have not to look far to find the reason of the greater safety of ether. The full bounding pulse of ether anæsthesia shows how much the circulatory system is stimulated

by it, and the rapid and deep character of the breathing proves the same influence on the respiratory organs. So if instead of using an anæsthetic which has a tendency to depress both the respiration and the circulation (as chloroform has), we employ one that has a directly stimulating effect, we are much more likely to tide these "morituri" over their operations.

DERMOID CYST OF A BRANCHIAL CLEFT.

BY

THOMAS CARWARDINE, M.B., M.S. Lond., F.R.C.S. Eng.,

House Surgeon, Bristol Royal Infirmary.

A WOMAN with dermoid of the neck was admitted to the Bristol Royal Infirmary in February last, under the care of Mr. A. W. Prichard. She had a large bilateral tumour with a median isthmus in the submaxillary region, non-adherent to the skin and stationary on deglutition. The right lobe could be moulded, like putty, into any shape, and the fingers imparted their impressions to it. The left, harder and somewhat inflamed, had been incised four days before admission, when it is said fluid, like "fat," came away. Through the opening, the little finger could be inserted along the interior of the isthmus beyond the middle line. In addition there was a tubercle between the angle of the jaw and lobule of the ear, and there was a small nodule also upon the antitragus. (Fig. 1.)

The patient, who was 32 years of age, gave the following history: When she was 15 years old a small lump was noticed in the neck. A photograph taken two years afterwards shows a condition almost as bad as that on admission recently.

Her mother has a median hairy mole in the submaxillary region, and a small cervical tubercle about half-way down the anterior border of the left sterno-mastoid. The patient's children present no such abnormality.

Mr. Prichard incised the left side and dissected away a portion of the sac-wall as far as the tongue and body of lower jaw where it became adherent. The right side was similarly treated. The contents were removed by the finger, and consisted of about 5 ounces of a mass exactly resembling the stale, dry, hard roe of a fish. The elements of this were distinctly *soft*, were uniformly about the size of a millet seed, and to the naked eye a slight difference could be seen between the centre and periphery of each. Chemical examination showed the presence of albumen and globulin, urea to the extent of 0·2 per cent., phosphates and chlorides, and a trace of iron—probably from the presence of blood.

Microscopical examination of the small round bodies showed their epithelial structure and laminated arrangement, with an outer crust and central core. The cyst-wall exhibited the ordinary epithelial lining resembling skin with the superficial horny scales exfoliating. A supposed nodule in the cyst-wall led to the preparation of a section through the part. The nodule at first sight resembled a lymphoid nodule, but on examination with a high power it was seen that the cells composing the nodule were of epithelial and not of connective tissue type. This section is important; for if this nodule be the predecessor of one of the millet-seed bodies in the contents, it points to the origin of the roe-like material from epithelial cell-nests in the stroma of the cyst-wall.

It only remains to state the points of interest. The diagnosis and the treatment need no remark.

What strikes one at first sight, is that we are dealing with a dermoid condition of a branchial cleft, rather than a simple dermoid cyst. We have in this case proof that median dermoids of the neck may arise quite independently of the thyro-lingual duct. The isthmus of this tumour corresponds to such a median cervical dermoid.

Secondly, we have what we may call, for reasons presently to be explained, a branchial tubercle associated on the same side with an accessory antitragus. This demonstrates that branchial tubercles may arise independently of supernumerary or of cervical auricles.

Thirdly, this case affords evidence to show that the outer ear represents, not one operculum, but two opercula. The two sketches appended are for the comparison of Mr. Prichard's

FIG. 1.

Branchial Dermoid.
Branchial Tubercle.
Accessory Antitragus.

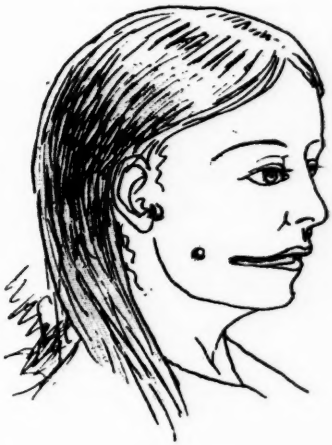


FIG. 2.

Macrostoma.
Mandibular Tubercle.
Accessory Tragus.

case with that of a similar condition occurring in the face. In Fig. 1, the case under consideration, an accessory antitragus is associated with a branchial tubercle, as we may call it for uniformity of nomenclature, and a dermoid of the 1st branchial cleft. In Fig. 2, we find existing together a supernumerary tragus (a common peculiarity), a mandibular tubercle on the cheek, and a macrostoma, all on the same side. Thus, in these two pathological examples we have clear evidence that the tragus represents the operculum related to the mandibular fissure, and the antitragus and its connections that related to the 1st branchial or hyomandibular cleft.

In the fourth place, I would draw attention to the peculiar contents of the tumour. Some four views suggest themselves as

to their origin: (1) They may be epithelial pearls. But they are far more numerous than true pearls occur, and are soft instead of having the hardness of enamel. (2) They may be products of sebaceous glands. But there is no evidence of any sebaceous glands existing in the cyst-wall. Moreover, in ovarian dermoids sebaceous glands are often large and numerous, but such contents are not found—or if found, are very rare. (3) They may be simply the exfoliated epidermis rolled into shape by mechanical movement. The following note occurs in Mr. Bland Sutton's monograph:—"In rare cases dermoids have been found to contain a collection of rounded bodies resembling pills; they are collections of epithelial cells rolled into balls."[1] (4) They may be products of definite development, produced from residual epithelial cell-nests in the stroma of the cyst-wall, just in the same way as the elements of the Graafian follicle are produced from epithelial cell-nests in the stroma of the ovary.

Now, the last two views seem the only tenable ones, and it is difficult to choose between them. We may conclude, however, by stating the arguments in favour of the developmental view, by a process allied to ovulation in the ovary. It seems unsatisfactory to call the rounded bodies "pills" or "balls" when their great uniformity in size and character—so apparent in the fresh state—suggests a definite plan of construction by developmental agency. There is just as much reason theoretically for allowing that a hyomandibular dermoid should have roe in its contents, as that an ovarian dermoid should contain teeth. The fact that roe-like bodies like those in this case are not found in ovarian dermoids, or if so, very rarely, can be no argument against their occurrence in cervical dermoids; for it is characteristic of the contents of dermoids that they are *not* native to the part, and that there is usually an absence of structures normal to the part. For instance, in the case of ovarian dermoids, we commonly find teeth, hairs, horns, sebaceous glands, and so on, but not ova. Now, the genital ridge of epithelium from which the ovary is derived is essentially mucous membrane, and the ovarian follicles are essentially mucous glands. There is thus

[1] *Dermoids.* 1889, p. 8.

complete homology between the tissue of the cyst-wall and that of an ovary, for skin and mucous membrane are pathologically mutable and interchangeable. The epithelium of the genital ridge is a part of the epithelial lining of the primitive alimentary canal, for the cœlom or pleuro-peritoneal cavity was developed primarily by an abstriction from the primitive alimentary canal or archenteron.

The homology thus proved, what evidence have we that the conditions of development are analogous? We have first of all the microscopic appearances of the nodule in the cyst-wall. It is apparently composed of a mass of epithelial elements, somewhat encapsuled in the connective tissue: a nest of epiblast or hypoblast in a stroma of mesoblast. If this mass be the predecessor of one of the small bodies in the interior of such a cyst, it becomes at once obvious that they are not "masses of shed epithelium rolled into balls or pills."

To the naked eye, the resemblance, especially when fresh at the time of operation, to fishes' roe was very close. It is true that the rounded bodies are larger than human ova, but size is an element which has absolutely no morphological importance in the face of facts derived from structure and development.

The conditions of this tumour are comparable to those which obtain in the ovary of a frog in the breeding season, which consists of a main cavity with numerous diverticula lined with cells,—some, larger than the rest, being ova. The frog's ovary appears like a gland secreting ova into a main cavity.[1] It is unnecessary to prove structural identity in order to establish morphological homology. The arguments given are those in favour of the view that the roe-like rounded bodies are morphologically ova, using the term in a wide sense, homologous with the Graafian follicles of the ovary.

The alternative view is that they are simply masses of exfoliated epidermis rolled into balls or pills. The mechanical principles involved will commend themselves to all who have practised the art of dispensing.

[1] Bland Sutton. *Op. cit.*, p. 129.

A CASE OF LIGATURE AND DIVISION OF THE VASA DEFERENTIA FOR PROSTATIC HYPERTROPHY.

BY

C. W. J. BRASHER, M.R.C.S. Eng., L.R.C.P. Lond.

THE operations of ligature or of division of the vasa deferentia in cases of hypertrophy of the prostate, have been recently recommended as alternatives to the more heroic procedure of castration, amongst others by Ewing Mears[1] of Philadelphia, and by Pavone of Turin.[2] These operations have been markedly successful in the hands of Isnardi of Turin,[3] and of Tilden Brown of New York.[4] Mr. Reginald Harrison also mentions[5] a case in which he performed subcutaneous division of the vasa deferentia with a successful result, and, more recently, he has recorded three successful cases of ligature of the vas.

Whilst castration, double or single, has yielded most remarkable results—a considerable percentage of the patients being able to discard the catheter entirely, and a great number of the other patients experiencing great relief—several fatal cases have shown that it is occasionally attended by considerable danger; and this fact, apart from the natural objection most patients feel to an operation involving an obvious mutilation, is sufficient to justify a more extended trial of a comparatively trifling operation, and one which would not preclude subsequent castration as a last resource.

In the case which I am about to relate, the two operations were suggested to the patient, and it was pointed out that

[1] *Ann. Surg.*, 1895, xxi. 181.

[2] *Policlin.*, 1895, ii. 225; abstract in *Brit. M. J.*, 1895, ii., Epitome, p. 2.

[3] *Centralbl. f. Chir.*, 1895, xxii. 657; abstract in *Brit. M. J.*, 1895, ii., Epitome, p. 30. *Riforma med.*, June 19, 1895; abstract in *Brit. M. J.*, 1895, ii., Epitome, p. 42.

[4] *J. Cutan. & Genito-Urin. Dis.*, 1896, xiv. 21.

[5] *Brit. M. J.*, 1895, ii. 1605.

castration might be relied upon to relieve the urgent symptoms, whilst ligature of the vas deferens was less certain in its results. The patient was obviously disconcerted at the prospect of "losing his manhood," as he termed it, and consented eagerly to the alternative operation.

Mr. R. J., aged 79, has always been a very nervous, excitable individual, and for many years was a heavy drinker. He has always been healthy until five years ago, when he had a sudden attack of retention of urine, lasting thirty-six hours. His medical attendant passed a catheter *à boule*, and instructed the patient in its use. Since that time he has found it necessary to use the instrument more and more frequently, until, for a month before I saw him, he had been unable to pass any urine naturally, and he had observed that the difficulty in passing the catheter had steadily increased.

The patient sent for me on Monday, December 15th, 1895, as he had been unable to pass the catheter since the previous Saturday. I found him walking about his room in great pain, and he showed me four broken catheters, the result of his ineffectual efforts to relieve himself. With some difficulty I succeeded in passing a black *coudée* catheter with a stilette, and drew off about 2¼ pints of urine, which was of a port-wine colour from the quantity of blood it contained. This urine was neutral in reaction; sp. gr. 1022; no sugar. There was some urethritis with great spasm of the urethral muscles, almost, in fact, amounting to a spasmodic stricture, but there was no organic stricture. *Per rectum*, the prostate was found to be enormously enlarged, apparently to the size of a Tangerine orange. The tip of the index-finger could not be passed beyond it, and it felt almost as hard as a solid mass of india-rubber.

It now became necessary to pass the catheter three or four times a day, and the resistance was so great that the stilette was always needed. The prostate bled very freely every time the catheter was used, and there was no diminution in its size after rest in bed and routine treatment continued for several days. The patient, alarmed by the frequent loss of blood, was most anxious for an operation; but, as I have mentioned,

shrank from submitting to castration. It was therefore decided to ligature and divide the vasa deferentia.

It occurred to me that if the atrophy of the prostate following these operations were secondary to the atrophy of the testes, this result might be brought about more quickly, and at the same time the congestion of the prostatic plexus would be somewhat relieved, if the spermatic arteries were ligatured during the operation.

On December 24th, with the assistance of Mr. Freeman and Mr. Rayner, I divided both vasa deferentia between double catgut ligatures, and excised about ¼ inch of the vas on the left side. The spermatic arteries were also ligatured. The right one was easily recognised by its pulsation towards the anterior part of the cord, but the left one was much more difficult to find on account of there being a varicocele on that side. There was also a hydrocele on the left side, which was emptied with the exploring syringe before the operation. The wounds healed by first intention, and the patient made fairly rapid progress.

The third time the catheter was passed after the operation the urine was quite free from blood, and was tested for albumen with a negative result. The reaction was slightly acid, and has been acid ever since.

The day after the operation (December 25th) 6 oz. of urine were passed naturally. I regarded his as a coincidence, but on the following day 9 oz. were pas d, and on the third day after the operation the quantity passed naturally was 14 oz. The urethritis and urethral spasm persisted for many weeks and retarded the patient's recovery; and he has had, unfortunately, three attacks of bronchitis (accompanied by much vesical irritation and catarrh) since the operation, and during these attacks the retention returned to some extent. He has, however, been able to go repeatedly for two days without requiring the catheter, and although, after the last attack of bronchitis, it was passed every night for some weeks, the average amount of residual urine was only 5 oz. or 6 oz.—about $\frac{1}{5}$ of the total quantity evacuated in twenty-four hours.

The patient now finds that his bladder will hold 8 oz. or 10 oz. of urine without much discomfort, but he cannot pass

more than 2 oz. or 2½ oz. as a rule before the sphincter of the bladder and the urethral muscles contract spasmodically, and he has to wait a few minutes before he can pass any more. When he first began to micturate naturally after the operation, the quantity evacuated on each occasion was never more than ½ oz., so there has been steady improvement in that respect. He has also observed that when a larger quantity of urine than usual is secreted during the night (*e.g.* 15 oz. or 20 oz.), and the bladder becomes distended, the first attempt at micturition brings on a powerful contraction of the sphincter, which can only be overcome by the catheter; but these attacks are becoming less frequent.

Since the beginning of April (sixteen weeks after the operation), with two exceptions, the patient has only required the catheter to be used on alternate nights, and, once or twice, every third night has been sufficient. The quantity of residual urine is from 5 oz. to 7 oz. He has improved greatly in general health, and has gained flesh; he is very seldom obliged to get up to micturate before 6 or 7 a.m., and he finds every week that he has to strain less during the act.

The prostate has slowly decreased in size, until now (April 24) it appears to be somewhat less than two-thirds its former size, the finger passing well beyond it, and it is *flatter* than when first examined.

For about three months after the operation the testes were markedly smaller and very tender on pressure, whilst there was much "matting" and thickening of the cords, chiefly on the proximal side of the wound. The testes have now nearly regained their former size, the tenderness has disappeared, and the thickening of the spermatic cords can hardly be felt. The right epididymis is large, and, as has been observed by Isnardi, decidedly nodular. The varicocele on the left side cannot be felt; but the hydrocele has filled up to some extent, although it is not yet necessary to empty it.

Although my patient's progress has not been so rapid as that of some of the patients whose cases have been recorded, he is still improving. Bearing in mind his advanced age, the great hardness of the prostate, and the long duration of difficult

micturition, I think it is doubtful whether he would have improved more rapidly if castration had been done; whilst his nervous and excitable temperament and great repugnance to that operation must have increased its danger.

Several surgeons who have had considerable experience in these operations consider that the ligature of the spermatic arteries is unnecessary; but when, as in the present case, the patient is losing a large quantity of blood every time the catheter is passed, and it is necessary to lower the vitality of the testes as quickly as possible, the ligature of the artery may help to bring about that result more quickly than if the vas deferens only were divided.

Table showing the total quantities of urine passed naturally, and drawn off by catheter, from December 24th (operation) to April 24th (17½ weeks):

	Quantity passed naturally. oz.	Residual urine. oz.
Dec. 24th — 31st	77	200
Jan. 1st — 7th	? [1]	59
„ 8th — 14th	78½ [2]	128
„ 15th — 21st	146½	44
„ 22nd — 28th	113½	26½
„ 29th—Feb. 4th	131½	20½
Feb. 5th — 11th	106½ [2]	100½
„ 12th — 18th	33½	115
„ 19th — 25th	97	70
„ 26th—Mar. 3rd	44 [2]	159
Mar. 4th — 10th	132	68
„ 11th — 17th	109½	89
„ 18th — 24th	144½	39½
„ 25th — 31st	190	39
April 1st — 7th	177	22½
„ 8th — 14th	170 [3, 4]	43
„ 15th — 21st	196½ [3, 5]	48½
„ 22nd — 24th (3 days).	90½	5

[1] Quantity could not be measured, patient had diarrhœa.

[2] Bronchitis and vesical catarrh.

[3] Retention occurred one morning this week from over-distension of bladder.

[4] Patient drew off 24 oz. in early morning (April 9).

[5] Patient drew off 15 oz. in early morning (April 17).

May 15th.—"The patient has made fairly rapid progress towards almost complete recovery, and at this date—20½ weeks after the operation, he has not required the catheter for a week, and only micturates ten or twelve times in twenty-four hours. His general health is so good that he can walk up some of the steepest hills in Bristol."

Progress of the Medical Sciences.

MEDICINE.

The discovery at Bath of **an organism** found almost invariably **in joints affected by rheumatoid arthritis**[1] is one of the highest importance, and calls for our hearty congratulations. The successful reproduction of the disease by inoculation, or its relief by an antitoxin prepared from the growth, will be eagerly looked for as the crowning proof in a laborious investigation.

Many observers have of late sought in vain for a similar cause for acute rheumatism, which presents many analogies to septic diseases; but though Leyden[2] has cultivated a microbe from **rheumatic endocarditis**, still that lesion is caused in so many different pathological circumstances that little importance can be attached to it. In speaking of this lesion we may refer to the practical results in preventing it recorded by Caton. The proportion of heart troubles can, he thinks, be greatly reduced by his method.[3] He not only insists on absolute rest with flannel bedclothes and salicylates, but as soon as the slightest blurring of the heart-sounds occurs, he applies a small blister over the apex of the heart, and, as the effects of that pass away, another close to it, and so on, until with absolute rest and the addition of iodides to the salicylates the murmur disappears, as it generally does if this treatment is persevered with long enough.

In gout, too, the question of an auto-intoxication from defective metabolism as opposed to a microbial poison causing lesions in which urates are passively deposited is hotly discussed. Thus salicylates have been given as a germicide and again as increasing the excretion of uric acid; but Bohland shows that, in health at least, the increased excretion of uric acid is due to their causing a great increase in the white corpuscles.[4] This, of course, lends

[1] See p. 123 of this number. [2] *Deutsche med. Wchnschr.*, 1894, xx. 913.
[3] *Liverpool M.-Chir. J.*, 1895, xv. 325; abstract in *Med. Rec.*, 1895, xlviii. 748.
[4] *Centralbl. f. innere Med.*, 1896, xvii. 70; see *Edinb. M. J.*, 1896, xli. 871-2.

force to the view that uric acid is chiefly formed from broken-down leucocytes. Klemperer,[1] Berkart, and others regard the lesions in the joints as produced by some unknown agent, and the uric acid deposited there passively. The former shows that the supposed excess of the acid in gout exists in other diseases, as in leukæmia, and is not the cause of the deposition, for gouty blood is far from saturated and can dissolve much more than is present; while Neusser finds an excess of leucocytes in the same blood.

* * * *

Besides the production of disease by the schizomycetes, other parasites play an important part. Thus the **Tsetse fly-disease**, which destroys the cattle and horses over immense districts in Africa, has recently been shown to be probably due to a plasmodium which is merely conveyed by the fly. When introduced into a suitable animal it multiplies enormously, so that over 300,000 have been counted in a cubic millimetre, and it forthwith commences to destroy the red corpuscles, producing a profound and fatal anæmia. However, the plasmodium is rarely, if ever, pathogenic to man, any more than the germ of **Texan cattle fever** which seems to be similarly conveyed by certain lice.[2] It is otherwise with the plasmode of **malaria**, which destroys more human beings than any other disease except, perhaps, phthisis. In malaria and phthisis then we have the two great types of these **diseases**, the **plasmodial** and the **bacterial**. The latter has been long studied, and we are in theory at least able to combat it by vaccinations and antitoxic serums. In the former nothing of the kind has been found effective. In America the plasmode has been discovered universally in every well-marked case of malaria, and most European and Indian observers have found it in the great majority of their cases; but Lawrie[3] almost alone denies its specific origin and looks upon it as a retrograde product of the blood-cells. He denies that it is to be found in many of the worst cases of malaria. He points out that it has never been isolated in a pure culture, though Manson claims to have produced a malarial attack and vast multitudes of the plasmodes in the body by injecting a minute quantity of infected blood.

Lawrie answers this by saying that the injection of healthy blood is normally followed by a febrile attack. Moreover, he insists that the "swarming" movement of Laveran's corpuscles can be easily seen in the white corpuscles of man, and the flagellate and ciliary bodies are, he thinks, due to ordinary changes in these protoplasmic bodies. A much more doubtful part of his criticism is based on his observations on the history of white corpuscles in frogs' blood. These he finds are at first intra-corpuscular, and later on free and able to change them-

[1] *Deutsche med. Wchnschr.*, 1895, xxi. 655; abstract in *Med. Chron.*, 1896, N.S. iv. 116
[2] *Nature*, 1896, liii. 566. [3] *Brit. M. J.*, 1896, i. 1135.

selves into crescents and other orms. Thus every characteristic of Laveran's cells has its analogue in the blood-cells of man or reptiles. On this theory malaria is an endemic disease of the spleen, akin to that of the thyroid, and the so-called organisms are the degenerate, atavistic blood-cells which the diseased organ manufactures and which have reverted to reptilian types. The periodic fever is an exaggeration of the effects of the diurnal activity of the spleen, which activity, with its nocturnal inactivity, is in health the cause of the variation of the morning and evening temperatures. In disease this may give a quotidian, tertian, or other paroxysm. Finally, when the splenitis is chronic and profound, the functions of the spleen are in abeyance; even Laveran's corpuscles are not produced, and permanent failure of nutrition and anæmia follow.

Though we must hesitate before accepting chronic splenitis as a cause of the anæmia in malaria, or indeed Lawrie's strange views as to the origin of reptilian white corpuscles, his argument is singularly ingenious, and the criticism is perfectly just that the canons of proof on behalf of Laveran's corpuscles are far from complete. It is probably true on either hypothesis that the anæmia, at any rate in the early stages of the disease, is due to the destruction of red corpuscles, and not to their insufficient production.

Manson[1] confesses that objections will have weight against the plasmodium until the disease is communicated by the administration of plasmodial forms which have, for instance, been passed through the body of the mosquito, for this he regards as the carrier of the organism and its intermediate host. He has not indeed traced it into the tissues of that insect, but he and Surgeon-Major Ross have shown that the crescents when swallowed by the mosquito, instead of being killed and digested, rapidly develop in its stomach and become first spheres and then flagellated as if in preparation for extra-corporeal life. He draws with wonderful skill the various analogies between the known course of the filaria sanguinis hominis in its passage through the mosquito and what he believes to be the development of the malarial plasmode; and clearly the decision of the question whether Laveran's cells are abnormal body-cells, or a foreign invader, must depend on the possibility of tracing it through the mosquito or a similar host. Lawrie's theory indeed would add another gland to those whose mysterious functions have been so much invoked of late.

Whatever be the true pathology, one thing seems pretty clear, that practically the detection of Laveran's cells is of the highest importance. Our American brethren and Ross[2] have already shown that obscure cases supposed to be bronchitis or typhoid could be diagnosed and cured when these bodies were discovered in the blood. Besides there is reason to think

[1] *Lancet*, 1896, i. 833. [2] *Brit. M. J.*, 1896, i. 260, 293.

that cases of malaria are still to be found in rural districts in England, so that the question is not only of academic interest.

* * * *

The functions of the spleen with regard to another disease, **lymphadenoma**, have been decided in a manner analogous rather to the views of Manson than to those of Lawrie. The actual bacillus has been found in the spleen of a patient, cultivated and injected into an animal in which the disease was reproduced, and from the new growths in the glands of this dog a fresh culture of the same bacillus was obtained by Dr. Delbet.[1]

In a similar way the cause of **leucocythæmia** has, it is said, been traced. The enlargement of the spleen in this disorder appears to be a secondary phenomenon, for it is often absent in those acute forms which are fatal in a few days, and of which many instances have of late been given. In the discussion at the London Meeting, W. G. Spencer asserted the unity of several of these blood diseases, holding that just as we get general tuberculosis, strumous glands and phthisis from a common cause; so we find a generalised lymphadenoma, or lymphomas producing leucocythæmia and other forms. Here Delbet's bacillus would take the place of Koch's as the connecting irritant. However, we must not be carried away by the many clinical resemblances to septic diseases. For in the latter the leucocytosis is due to the increase of polynuclear cells, whereas in leucocythæmia the bulk of the cells consists of mononuclear ones. This is especially the case in the acute type as Fraenkel notices,[2] where the polynuclear ones may be absolutely diminished.

* * * *

In **typhoid fever** we have often a difficulty in making our diagnosis at an early stage, and often too an almost equally serious one in deciding when patients cease to be infectious; thus instances are known where a convalescent patient has spread the complaint among others. Elsner's[3] test for the presence of the typhoid bacillus by plate cultivations on a gelatinised emulsion of potato to which one per cent. of potassium iodide had been added, enables us to discover with ease whether it exists in the fæces or not. The typhoid bacillus and the bacterium coli are the only ones which survive, and the former produces circular transparent droplets on the plate in forty-eight hours. The difficulty of finding a trustworthy mode of distinguishing the typhoid germs has hitherto been a great practical difficulty.

We need, however, to remember that there are other means of infection besides fæcal contamination. The urine appears to be a possible channel, for Wright and Semple found active bacilli in the urine of six out of seven cases,[4] and they remark on

[1] *Med. Week*, 1895, iii. 307.
[2] *Deutsche med. Wchnschr.*, 1895, xxi.; abstract in *Med. Chron.*, 1896, N.S. iv. 267.
[3] *Lancet*, 1896, i. 73. [4] *Lancet*, 1895, ii. 196.

the proof this fact affords of the septicæmic nature of the disease and the distribution of the infection through the whole of the blood.

The end of the infective stage again, in some cases, must be put long after the urine and fæces are free of germs, for they can be found in suppurative discharges for an unlimited period, notably for years when a sinus has formed after osteomyelitis.

It has been suggested that the delicate modern tests for albumose would show the continuance of infectiveness, since so long as bacterial metabolism or suppuration goes on, so long will surplus albumoses be excreted by the kidneys. Harris,[1] of Chicago, finds such a test in a saturated solution of salicyl-sulpho-tungstate of sodium, a few drops of which form a cloudiness in urine if any albumoses are present. Of course all albumen must be first precipitated and removed. Harris insists that the so-called peptonuria, or albumosuria, is simply a symptom of bacterial peptonising action and may be often taken as a test of the severity or mildness of the attack. It does not, however, seem at all clear why this reaction is so fortunately absent from the strivings of the bacillus coli and yet appears in exact proportion to the severity of typhoid or of suppuration.

It may be interesting to notice here that the typho-toxin, according to Bokenham and Soltau Fenwick,[2] consists of an albumose which they found in the spleen of patients dying in the height of the disease, and which when injected into animals produced pyrexia, loss of flesh, and anorexia.

The **diazo-reaction** is growing in favour as a clinical test, though it has many limitations and is found in certain other diseases, notably pneumonia. Among other precautions, Hewlett remarks that the urine and the sodium nitrite must be fresh, and that the latter must not be in excess. The mixture must be made alkaline, and the resulting colour-reaction should be a deep red and the foam a definite salmon colour, if typhoid is really present.[3] Of course no reaction is found either at a very early or at a late stage of the disease.

One other symptom of typhoid of some value in prognosis is to be found in the **ulcers** not infrequently seen **on the palate and tongue**. These are said to run a similar course to those of the intestines and show by their healing or the opposite the progress made in the intestinal ones.[4]

Nothing very new has been proposed in the way of **treatment.** Various attempts have been made to show that a less restricted diet is desirable, and that meat extracts, milk sugar, somatose, and similar substances may be added to the milk diet with advantage, while on the other hand Lesser [5] and others report satisfactory results when the patients took nothing whatever but water, in the worst period of the disease, for days together.

[1] *Am. J. M. Sc.*, 1896, cxi. 557. [2] *Brit M. J.*, 1895, i. 801.
[3] *Brit. M. J.*, 1896, i. 136. [4] *Brit. M. J.*, 1896, i. Epitome, p. 45.
[5] *Med. Rec.*, 1895, xlviii. 541.

The cold bath treatment has been opposed by the advocates of the external use of guaiacol (10 to 20 drops painted on the skin and covered over), but symptoms of collapse after it are not unknown. Its recent successful use in rheumatoid arthritis suggests that it possibly may have an inhibitory action on the bacillus. Many of the supporters of Brand's treatment now claim that the mortality is reduced to three per cent., and Brand himself says that in 1,200 of his cases none died who were bathed before the fifth day. A discussion of the subject at Birmingham showed some difference of opinion. The records at the General Hospital, for ten years, give a mortality of 16.8 per cent.; but this appears largely owing to the late date at which patients come in. Thus Saundby was able to show a death-rate of only 6.5 in his more recent ones, and bathing is confessedly of little use unless begun early. Simon thinks that the constant care and observation necessitated by bathing have much to do with the success claimed for it.[1] It is probable too that the rapid excretion as shown by the toxicity of the urine under bathing has more to do with the result than the lowered temperature. Jacquet also proves that, in typhoid, the red corpuscles tend to leave the general circulation and to accumulate in the spleen and glands; but with cold baths this anæmia is overcome and the increase of corpuscles in the general circulation is enormous.[2] Similar results are aimed at by some American physicians, who, besides preliminary doses of calomel, administer as much cold water as the patient will drink, and wash out the bowels at frequent intervals with cold or tepid water.

* * * *

The **Vaccination controversy** has been unusually active. The most striking part of it is the assumption by its opponents that abiogenesis of the small-pox virus exists or at any rate that the virus has a normal *habitat* outside the body in decaying matter, for which there does not appear a particle of evidence. Truly the phrase "insanitary conditions" is mighty to conjure with. The controversy will never be set at rest until the small-pox virus is isolated in a pure cultivation and the action of vaccine explained. Hence the work of Monckton Copeman bids fair to be most important. He and Klein discovered minute bacilli in early stages of vaccinia and of variola. After numerous attempts he succeeded in inoculating those obtained from small-pox into hens' eggs, the outside of which were carefully sterilised, and these he kept for a month at a temperature of 37°. He found in them a pure cultivation of the bacillus, with which he vaccinated calves and obtained vesicles, from which in turn he vaccinated himself and several children with complete success.

[1] *Birmingh. M. Rev.*, 1896, xxxix. 262.
[2] *Med. Chron.*, 1896, N.S. iv. 148.

There are certain possible fallacies in the method employed which render it most important that these experiments should be verified without delay, and on this he is now engaged.[1]

* * * *

An interesting discussion took place at Edinburgh on a paper by J. C. Dunlop, respecting the significance of **oxaluria.** He showed that oxaluria could be easily produced in health by adding oxalates to the food and that it stopped when the diet contained none.[2] Moreover, he denied that oxaluria was a sign of perverted metabolism or disease of any kind, though the passage of oxalates may be painful. Finally he disposed of Begbie's oxaluria as a form of acid dyspepsia. We may, however, say that though he showed that oxaluria was often a normal process, further observation is needed to show that it never occurs as a result of diseased metabolism.

GEORGE PARKER.

SURGERY.

We are all interested in **appendicitis,** whether we practise medicine or surgery. Every now and again we are called to the bedside of a patient suffering from this disease, and we have to take the grave responsibility of deciding whether operative interference is required. If we relieve symptoms by opium and congratulate ourselves on a fall in temperature, we may conclude that all is well, when unfortunately all is not well, and the precarious barrier thrown out by Nature around the sloughing appendix, may just have given way, and general infection of the peritoneum—which we feel almost powerless to deal with when once it has started—have commenced. Or, again, a case which we watch day by day as one of localised appendicitis may really have infected the general peritoneum from the first; and while we are anxiously waiting for improvement, more and more surely is the disease fixing its fatal hold on the patient.

Since the discussion on appendicitis at the meeting of the Bath and Bristol Branch of the British Medical Association,[3] in January, 1894, many very valuable contributions to the literature of the subject have appeared. I intend only to refer to them in connection with the all-important question, **When should we operate?** And, first I must say that it seems to me that if we base our opinion on any classification of the forms of the disease, we shall not find that opinion of much value as we stand by the bedside of the patient; for we cannot in many—perhaps in most—cases tell from the symptoms the actual condition of the appendix, or what course the disease will run. Morris of New

[1] *Practitioner*, 1896, lvi. 475-9.
[2] *J. Path. & Bacteriol.*, 1896, iii. 389; abstract in *Edinb. M. J.*, 1896, xli. 634.
[3] *Bristol M.-Chir. J.*, 1894, xii. 9, 68.

York puts this forcibly.[1] He says: "We may speak of the acute or chronic form, the form of endo-appendicitis, or of perforation . . . and so on indefinitely; but as endo-appendicitis may be present on Monday and perforating appendicitis may appear on Wednesday in the same case without our being able to state what Friday appendicitis may be like, we might classify these cases as 'Monday,' 'Wednesday,' and 'Friday' appendicitis. . . . There are no groups of symptoms which will allow us to make a rational prognosis as to the eventual outcome, or the prospective complications in any progressing case of appendicitis, and we must abandon the hope of having any such classification of symptoms for a guide in the future. . . . I speak, then, unequivocally, knowing that some patients are to die and others are to suffer unnecessarily because their advisers will believe themselves to be upon a prognostic track. There is but one rule to be followed, and that is to isolate an infected appendix as promptly as we would isolate a case of diphtheria and for practically the same reasons, viz.: the infected appendix will probably infect other structures, and the infected throat is likely to infect other throats." Thus strongly writes Morris, a surgeon of large experience in appendicitis. On what facts does he rest so decided an opinion? He says: "Statistics from a large number of observers give an average death-rate in the principal attack of appendicitis of about 15 per cent. under medical treatment,"[2]; whereas he believes a death-rate of 2 per cent. is too high in cases operated on in the first attack, before infection has extended beyond the confines of the appendix. He has himself operated on 100 cases of appendicitis. In 59 cases where the infection was limited to the immediate vicinity of the appendix, and involving in many cases extensive operative work on account of adhesions, there were no deaths. In 23 cases where collections of pus were walled off from the general peritoneal cavity, 5 died: 2 of septicæmia, 1 of acute suppurative nephritis, 1 of intestinal obstruction from adhesions which could not be separated at the time of the operation on account of the patient's condition, and only one, "weak from several months of septicæmia," died of shock. These statistics, compared with those of cases not operated on, show that in such hands as Morris's the operation is practically free from risk, whereas the risk of waiting is very considerable. No doubt some of these cases would have recovered without operation: but I think the more we see of cases of appendicitis, the more we feel that we cannot separate the cases which will terminate favourably from those which will end fatally; and that if we attempt to, we may see several patients recover—perhaps in succession,—and then we shall lose a case which seems going on as favourably as any of the others. Surely, then, Morris is right when he urges removal in

[1] *Lectures on Appendicitis.* 1895, p. 35. [2] *Op. cit.*, p. 36.

all cases where the symptoms are marked and do not at once subside, seeing that there is so little risk in the operation if skilfully performed. Such teaching will seem strange to those who are in the habit of waiting for evidence of a collection of pus as an indication for operation. Unfortunately, while they are waiting for such evidence the general cavity of the peritoneum may become fatally infected. We must early in the disease open the peritoneum, isolate the infected area with sponges or iodoform gauze, then break into and drain any purulent collection, and remove the diseased appendix if possible. McBurney, as long ago as 1892,[1] criticised Treves's view as to the desirability of waiting for pus to come towards the surface. He writes: "The safe way to open these deep-seated abscesses is to first deliberately open the peritoneal cavity and carefully note the relations of the parts. It is then a comparatively simple matter to cautiously unravel the tangled mass of organs—that is, it is much simpler and safer than to cut steadily onward from the blind side, and before one knows what the wall of the abscess is made up of. Then, before such a deep-seated abscess is actually opened, if the road that has been cleared to it is lined with carefully held sponges, a small opening can be made into the abscess and the pus caught on a sponge almost guttatim and harmlessly removed. This practice has been a common and successful one in New York for a considerable time. Cases of deep-seated abscess opened at an early period in this manner will very rarely, indeed, end in any other way than in rapid recovery." I have successfully operated on two cases in this way. I opened the abdomen, and found in each case a swelling formed of adherent coils around a collection of pus in the region of the appendix. No adhesion had taken place to the abdominal wall. I very cautiously broke into the abscess cavity by gently separating the coils after packing around with iodoform gauze and sponges, and, as McBurney describes, sponged out the pus "almost guttatim," draining by means of iodoform gauze from the bottom of the abscess cavity out of the abdominal incision. In one case the sloughed appendix was discharged a few days after operation; in the other, I neither saw nor knew that I felt the appendix at the time of operation, nor was it discharged as a slough. I cannot agree with McBurney that it is a simple matter to unravel "the tangled mass of organs." It seems to me that in some cases it may be very difficult to break into the mass of adherent coils and find the pus without lacerating the inflamed intestine. I felt sure there was pus in these two cases from the definite nature and persistence of the localised swelling, together with marked symptoms, though no fluctuation was present. In fact, it seems to me distinctly dangerous to press very firmly in any attempt to get fluctuation, for fear of rupturing a localised collection into the

[1] *Med. Rec.*, 1892, xli. 423.

general peritoneal cavity. With regard to the value of rectal examination in appendicitis, McBurney writes:[1] "In the early stages of appendicitis this method has no value whatever. Of course, those who are accustomed to allow abscesses to reach a large size, will in time find a bulging tumor low down in the pelvis. We had better devote our attention to learning the signs of suppurative appendicitis before the abscess has threatened the rectum."

Morris's success in cases where **general peritonitis had already set in** is truly marvellous. Out of 6 cases of intense general septic peritonitis, with the whole abdominal cavity bathed in pus, 5 recovered. Such success is unheard of in this country. I have by free irrigation and drainage recently saved a patient into whose general peritoneal cavity a large quantity of stinking pus had escaped from rupture of a pelvic abscess: but although I have operated in several cases of septic peritonitis, I have never saved one yet; and we operate with little expectation of saving them, though we feel we ought to give them the very slight chance which operation affords. Lockwood and a few other surgeons in this country have, however, been now and then successful. But American surgeons—Morris, Murphy, McBurney, and others—have apparently saved many of these cases. Looking at the fact that when once general septic peritonitis has set in our resources are of so little value, how important becomes the question of early operation!

Can we tell at the outset whether we are dealing with a case of localised appendicitis or general peritonitis? Murphy[2] considers that we cannot, and he records a case in point, where only the symptoms of appendicitis were present and the young man was walking about, but pus was found free in the peritoneal cavity. By early operation in this case life was saved. A careful study of Murphy's 141 cases[3] will show that whereas general septic peritonitis was found at the operation, the symptoms did not point to a condition of such gravity in several of the cases. In case 103, a week after the sudden onset of the attack, the temperature was 99.5°, pulse 90, and there was no collapse, but general septic peritonitis was present. In case 108, 31 hours after the onset of the symptoms, there was no collapse, the temperature was 99.7°, and pulse 80, but the peritoneal cavity was full of thin purulent fluid. Contrast with these case 83 in which no peritonitis existed, but the appendix contained pus. The patient was 13 years of age. Murphy thus describes the symptoms: "This is a particularly interesting case, the temperature keeping above 105° and the pulse 134 from the beginning of the attack up to the time of operation. Abdomen enormously tympanitic and tender. He presented all the so-called classical symptoms of general septic peritonitis." McBurney's

[1] *Loc. cit.*, p. 425. [2] *Med. News*, 1895, lxvi. 1.
[3] *J. Am. M. Ass.*, 1894, xxii. 302, 347, 387, 423.

experience has been the same.[1] He writes, with reference to a series of cases he operated on (to which reference will again be made) in which either pus was found free in the peritoneum or general peritonitis had already commenced: "The character of the case has usually, but not always, been appreciated by the widespread tenderness, high temperature, rapid pulse, increased vomiting, and positively ill look of the patient. In some of the cases, the signs have been only those of ordinary well-localised suppurative appendicitis." These cases of perforative appendicitis do not begin by collapse, as in the cases of perforating gastric ulcer. The symptoms at the onset may be the same in mischief within the appendix as in perforation with commencement of general peritonitis. The pain in perfectly localised appendicitis is often, at first, not in the right iliac fossa, but at the epigastrium; and the indication from general tympanitic distension and tenderness is not always a trustworthy one. I operated, a few weeks ago, on a case of appendicitis which had set up general suppurative peritonitis, in which the tympanitic distension was less than in many cases of localised mischief. The indication of general tenderness could not be relied on, as the boy had been placed fully under opium. The temperature is, of course, no guide, nor in the early stage the pulse either.

Murphy[2] is emphatic in his statement that all cases of appendicitis beginning with severe symptoms ought to be operated on. He says: "It is estimated on good authority that from 27 to 30 per cent. of all cases treated medicinally terminate fatally sooner or later, if not operated on." Out of his own 141 cases he lost 16: but in 12 of these septic peritonitis was present at the time of operation. He considers the dangers of the operation in competent hands to be *nil*.

Barling,[3] in "The Ingleby Lectures on Appendicitis," discusses the question of operation. He lays down rules for the differentiation of perforating appendicitis from other kinds, and only advises immediate operation when the former is present. But I think his indications will not stand the test of clinical work. He admits that in children we can hardly expect to differentiate perforation at all. McBurney[4] records several cases of **peritonitis from perforation of the appendix** saved by washing out with sterilised saline solution, and drainage by strands of gauze and a glass tube passed into the pelvis. He uses a sterilised saline solution, believing that this does not damage the endothelium of the peritoneum, as even mild antiseptic solutions do: for anything which damages the endothelium will interfere with absorption, a process of great importance if a patient suffering from septic peritonitis is to recover. I do not know that we can call all McBurney's cases general peritonitis, but they were all cases of general peritoneal

[1] *Med. Rec.*, 1895, xlvii. 385. [2] *J. Am. M. Ass.*, 1894, xxii. 302.
[3] *Brit. M. J.*, 1895, i. 1255. [4] *Loc. cit.*

infection. In some no evidence of the presence of peritonitis, on operation, is given, but in these purulent fluid had run down from the region of the appendix into the pelvis, and the onset of peritonitis was only a matter of time. His success in so many cases seems to me to lie not so much in the use of saline solutions and multiple gauze drains as in the fact that he operated within the first few days of the attack. I have lately operated in one case by McBurney's method. A boy was admitted into the Bristol Children's Hospital with symptoms of general peritonitis; within 36 hours of the onset (a few hours after his admission) I cut down on the appendix and found it sloughing and perforated, with a small collection of stinking pus around; and from the region of the pelvis (before I reached the pus around the appendix) purulent fluid escaped freely. After removing the appendix and swabbing out the localised collection of pus, I very thoroughly washed out the peritoneal cavity with saline solution (90 grs. to a quart), sterilised by boiling, and as there was remarkably little tympanitic distension, I was able to do this very thoroughly. I then drained from every direction with Morris's "wick" drains. For three days the boy's condition seemed encouraging; but although he never vomited again or seemed in pain, nor did tympanitic distension set in, yet after the first few days his strength gradually failed, and he died at the end of a week. At the necropsy pockets of pus were found here and there amongst the intestines, showing that the septic process had not been controlled.

The generally received view in this country is, that if operation for **relapsing appendicitis** is called for, it should be undertaken between the attacks, in the quiescent period. But if we run so considerable a risk as some American surgeons teach us we do in not operating on every severe case of appendicitis, what are the risks to the patient in not operating in cases in which the attack is a recurrent one? If we carefully examine Treves's record of 18 cases[1] of relapsing appendicitis on which he operated, we shall find that in several the appendix was not buried in adhesions, and might have caused fatal perforation at any time. In several it contained stinking pus, and one such, in which there had been eight attacks, had no adhesions at all. In several, collections of "custard-like material" were found amongst the adhesions, which could hardly have been other than drying-up pus. In an earlier record[2] of another series of these cases, he says that in the majority dealt with by operation pus was found. Hence it is evident that relapsing cases are not by any means free from the risk of setting up general peritonitis, and the advice usually given only to operate between the attacks cannot be safely followed. In Treves's first case of the first series, in the third attack "symptoms of general peritonitis ensued and the child's

[1] *Brit. M. J.*, 1895, i. 517. [2] *Ibid.*, 1893, i. 835.

life was despaired of." Three months later, when operation was undertaken (some tenderness persisting), he found a small encysted abscess and the appendix extensively ulcerated. This case shows how dangerous a relapsing case may be, and in connection with it I will refer to one under my own care. In the autumn I saw, in consultation, a gentleman with a swelling in the right iliac fossa. All the symptoms had subsided, but they had been such as to suggest appendicitis. I cut down on the swelling and found pus shut off from the general peritoneal cavity. As is the generally-accepted rule in such cases, and as I have found quite sufficient in other cases of the same nature I have operated on, I was content with the evacuation of the pus and left the appendix to take care of itself, as I could not feel it within the abscess cavity. In this case, for many weeks a sinus persisted, and several fæcal concretions, such as are found in the appendix, came away. At last it closed, but pus collected behind, and it discharged again. It finally closed about three months after operation, and the patient was able to get about and attend to his business. Then suddenly symptoms of general peritonitis set in, and although I operated within a few hours of my first seeing him and removed the perforated appendix, I did not succeed in saving his life. I know of one or two other cases where the mischief in the appendix has not come to an end after a localised collection of pus in connection with it has been drained and the sinus has closed. But this so rarely happens that probably we are not justified in laying open such localised collections of pus into the general peritoneal cavity by attempting to isolate and remove the infected appendix.

Mr. Treves[1] has just given us his present opinion as to the need of operation in appendicitis. He gives the mortality at 11 per cent. in non-suppurative cases, but 30 to 40 per cent. if abscess is present. But who can say in any given case that no abscess is present? As McBurney and others have shown, a collection of pus is frequently found long before fluctuation could be detected. Treves says: "An incision in perityphlitis is very seldom called for before the fifth day," and he strongly condemns what he calls "reckless and unnecessary incisions made without due cause during the first two or three days of the attack." We can only presume that many of the operations of McBurney, Murphy, and Morris would be thus described. Several years ago Treves wrote that he considered the indication for operation was distinct evidence of abscess, and to this he seems still to adhere. He says, however, that "in the ultra-acute cases it is well that the abdomen be opened at once in the cæcal region, and the case considered and dealt with as one of perforative peritonitis." But how impossible it is to be sure of the absence of perforative peritonitis in all severe cases I have already quoted instances to prove.

C. A. MORTON.

[1] *A System of Surgery*. 1896, II. 627.

OBSTETRICS.

The condition which has been described under the various names of **Deciduoma malignum**, sarcoma deciduo-cellulare, and decidual carcinoma has of late attracted great attention. The condition appears to have been first described by Sänger,[1] by whom it was given the now commonly accepted name of deciduoma malignum. A large number of cases are now on record, but with two exceptions none appear to have been met with in England, the great majority occurring on the continent of Europe. The chief characteristics may be briefly stated as follows: A pathological condition following expulsion of the products of conception, marked by rapid development of new growth in the uterus, generally, it is supposed, at the placental site, producing uterine hemorrhages, fœtid discharge, enlargement of the uterus, and metastatic deposits in other organs. Its clinical characters are chiefly: a close relation to pregnancy, especially to molar pregnancy; occurrence of hemorrhages and foul discharges, owing to the formation of a friable growth resembling placental *débris*; rapid deterioration of health; and, finally, the formation of metastases. Practical lessons are, that (1) Feeble measures such as the frequent use of the tampon and curette, except of the latter for diagnostic and exploratory purposes, are not to be recommended. (2) That total extirpation of the uterus as soon as the malignant nature of the growth is established offers the best chance of recovery.

In a paper on hydatid mole, Marchand[2] states that all the forms of cells described as large nuclear decidual cells, large sarcoma cells with nuclear giant-cells derived from connective tissue, proliferating endothelial cells, and transition of unstriped muscle elements into sarcoma cells, can be recognised without difficulty in the epithelial migratory cells of the hydatid mole.

Both the original growth and the metastases contain cells corresponding to those found in the uterine decidua, and, moreover, structures the cells of which resemble in their arrangement that of the cells of the chorionic villi: the disease, if treated expectantly, seems to run a rapid course to a fatal termination. There is considerable difference of opinion as to the particular class of malignant disease under which this condition should be placed: some observers name it cellular sarcoma, others are of opinion that it is of epithelial nature. The minute pathology varies apparently, not all the cases with very similar clinical characteristics exhibiting the same pathological structures,

[1] *Centralbl. f. Gynäk.*, 1889, xiii. 132, & *Arch. f. Gynaek.*, 1893, xliv. 89, quoted by Whitridge Williams, *Tr. Am. Gynec. Soc.*, 1895, xx. 348, and in *Med. Chron.*, 1896, N.S. iv. 207.

[2] *Ztschr. f. Geburtsh. u. Gynäk.*, 1895, xxxii. 405; abstract in *Med. Chron.*, 1896, N.S. iv. 288.

while the exciting cause may be—according to observers quoted by Whitridge Williams, and in the *Medical Chronicle*, January, 1896—ordinary pregnancy (with abortion[1] or delivery at term[2]), tubal pregnancy,[3] placental polypus,[4] or hydatid mole.[5] Of twenty-six cases recorded by Sänger[6] the majority were secondary to hydatid mole, and in the metastatic deposits were found cells and structures resembling exactly those found in the villi of the hydatid mole.

That malignant growth should be taken on by the molar villi is not altogether surprising when we remember its rapid growth, the way it penetrates into the uterine mucosa, and even perforates by growth (not by pressure) the wall of the uterus. It is obvious that the rapid cell-formation of such a structure must lend itself readily to diversion into a channel leading to malignant action.

That in a lesser degree malignant growth should be taken on by retained fœtal structures is also easily understood when one considers the rapid cell-growth and edacious character of those layers of the ovum in direct contact with maternal structures.

The question of the place of this affection among malignant growths seems difficult to settle. Among the epithelial malignant tumours would appear the most rational in the majority of cases, since the greatest activity is manifested by the epiblastic elements of the segmental layers of the ovum. The connective tissue elements of the decidua which, according to Eden[7], have absorptive or edacious powers, are those of the stroma of the maternal decidua; their activity is not apparently persistent.

Marchand's[8] conclusions on his two cases are interesting. He concludes that (1) All the cases are essentially of the same nature, although, owing to the parts involved and special circumstances, they may present individual differences. (2) All the tumours are epithelial, the layers of tissue combining in their formation being (*a*) the syncytium or uterine epithelial layer of chorion; (*b*) the elements of the ectodermic epithelium of the chorion. (3) These elements of two orders constitute the normal portion of the serotina. (4) The derivatives from the syncytium take different forms: (*a*) large cellules

[1] Sänger, *Centralbl. f. Gynäk.*, 1889, xiii. 132. Kuppenheim, *Centralbl. f. Gynäk.*, 1895, xix. 916.

[2] Whitridge Williams, *Am. J. Obst.*, 1894, xxix. 721.

[3] Marchand, *Monatschr. f. Geburtsh. u. Gynaek.*, 1895, i.

[4] Schmorl, *Centralbl. f. Gynäk.*, 1893, xvii. 169.

[5] Pfeiffer, *Prag. med. Wchnschr.*, 1890, xv. 327. Fränkel, *Arch. f. Gynaek*, 1895, xlviii. 80. Bacon, *Am. J. Obst.*, 1895, xxxi. 679. Menge, *Ztschr. f. Geburtsh. u. Gynäk.*, 1894, xxx. 323. Löhlein, *Centralbl. f. Gynäk.*, 1893, xvii. 297. Klien, *Arch. f. Gynaek.*, 1894, xlvii. 243, 705. Nové-Josserand and Lacroix, *Ann. de gynéc. et d'obst.*, 1894, xli. 109, 216, 317. Tannen, *Arch. f. Gynaek.*, 1895, xlix. 94.

[6] *Centralbl. f. Gynäk.*, 1889, xiii. 132.

[7] *Tr. Obst. Soc. Lond.*, 1896, xxxvii. 205.

[8] *Monatschr. f. Geburtsh. u. Gynaek.*, 1895, i; abstract in *Med. Chron.*, 1896, N.S. iv. 210.

with nuclei rich in chromatin; (*b*) protoplasmic masses with multiple nuclei; (*c*) trabecular and retiform tissue, the elements of which are multi-nucleated. (5) The elements of the cellular layer often present the appearance of clear cells rich in glycogen; these cells vary in colour, but are usually smaller than those of the syncytium. (6) Molar pregnancy favours the production of malignant neoplasms. (7) The decidual cellules, properly so-called, do not participate in the formation of malignant neoplasms. (8) The participation of the connective tissue of the chorion has not yet been demonstrated. (9) Metastatic productions are almost invariably conveyed by the blood. Marchand considers that although, as epithelial growths, these tumours might be considered carcinomata, still, owing to their peculiar relation to the development of the ovum, he concludes the best designation to be tumours of the serotina.

Gottschalk, in a case in which he extirpated the uterus after some delay, considered that the placental villosities had undergone a process of malignant degeneration, the cellules of the serotina being infected with sarcomatous virus; the metastases contained epithelial elements of the primitive tumours.

Pathologists differ much in their opinion as to the nature of the growth in these cases, but clinically the following definite statements can be made: (1) That a form of malignant disease of the uterus hitherto unrecognised has been differentiated. (2) The presence of syncytial masses of protoplasm is a striking feature of several of these tumours, as (3) is also the similarity between these masses and the chorionic epithelium. In both, protoplasmic masses not divided into definite cells, deeply-staining nuclei, and vacuoles of varying size, either empty or with transparent contents, occur: these facts have been observed by Meyer,[1] Klebs,[2] Gottschalk,[3] Fränkel,[4] Marchand,[5] and Whitridge Williams,[6] and are quoted by the latter in the article referred to. All these have concluded that they had to deal with growths derived from chorionic epithelium.

In the cases now on record, the points which are most striking seem to be (1) The number of cases which occur in connection with hydatid mole. (2) The fairly constant succession of symptoms; *e.g.*, hemorrhages, at first, followed by fœtor of discharges and cachexia. (3) The undoubtedly malignant character of the new growth, its characteristics being rapid invasion of tissue, rapid recurrence, early necrosis, and early metastasis. (4) The entire futility of attempting to deal with this condition by palliative or, rather, minor operative measures: *e.g.*, in one case after repeated *tamponnement* death apparently

[1] *Arch. f. Gynaek.*, 1888, xxxiii. 53.
[2] *Die allgemeine Pathologie.* 1889, II. 612.
[3] *Arch. f. Gynaek.*, 1890, xxxvii. 251 & 1894, xlvi. 1. *Berl. klin. Wchnschr.*, 1893, xxx.
[4] *Loc. cit.* [5] *Loc. cit.* [6] *Loc. cit.*

from septicæmia, and in several others symptoms of septic infection, occurred as the result of measures taken for relief; the cases subjected to early vaginal hysterectomy recovered and remained well for some months.

The case described by Whitridge Williams[1] has some very peculiar and important features; one is, the relation between the development in time and amount of growth of the primary tumour and the metastasis in the vulva; the vulvar metastasis developed two weeks after labour. If the uterine tumour was primary—and from the description there is no reason to suppose the contrary—its growth was much less rapid than that of the metastasis, and it must have been in existence two weeks after delivery; the occurrence of metastasis through the vessels renders this possible, the conveyance of a thrombus being sufficiently rapid. Instances are given by Schmorl[2] of the occurrence of thrombi in pulmonary arteries composed of placental giant-cells, without any tumour of uterus or placenta. The author, Whitridge Williams, mentions thrombi of chorionic epithelium formed in venous channels of the tube-wall in tubal pregnancy; and Pestalozza,[3] after a hydatid mole had been expelled, found pulmonary thrombi composed of myxomatous chorionic villi. If we allow to the tissues forming the thrombus the very evident malignant character of the primary formation from which they are separated, the rapid metastasis seems easily explicable. Some of the clinical features are worthy of mention: most of the patients are young, fifty per cent. of the recorded cases occurring before thirty, and seventy per cent. before forty, the remainder between forty and fifty-five; this is not remarkable, seeing that the growth is directly related to pregnancy. The character of the hemorrhage, which is usually intermittent, severe, and occurring in gushes, indicates the opening of a vessel; the uterus is enlarged, but its cavity filled, the contents friable and easily removed, leaving a cavity in the wall of the uterus. The recurrence of the growth is very rapid, as are also the metastases; vaginal metastases are common. The fact of vaginal metastases occurring after a tubal pregnancy seems to enable us to preclude the possibility of their production by direct implantation.

The course of the disease is rapid and ends fatally if not interrupted by proper surgical treatment. The diagnosis presents small difficulty in the later stage when metastases have occurred, but considerable difficulty exists in coming to a correct conclusion in the early stages when the microscopic evidence is probably all that can be obtained. The presence of syncytial masses between the muscular bundles and fibres, and extending into the muscular tissue, is the characteristic of the growth, and can enable a definite opinion to be formed.

[1] *Loc. cit.*

[2] *Pathologisch-anatomische Untersuchungen über Puerperal-Eklampsie.* 1893.

[3] *Morgagni*, 1891.

The practical conclusions to be drawn from the cases reported appear to be, that in any case where hemorrhage occurs in connection with the puerperal state, or after the puerperal period, more especially in cases of hydatid mole, the necessity for exploration of the uterus after dilatation of the cervix must be remembered. The symptoms indicating the necessity for this treatment are, the character of the hemorrhage and the enlargement of the uterus. These both appear to give an indication which, in most cases, is fairly clear: the gushing character of the hemorrhage, its irregular occurrence, the increase in size of the uterus after its involution, or involution becoming stationary, being rather different to the conditions of hemorrhage and enlargement occurring in simple or benign cases.

After exploration, a careful microscopical examination of any tissue removed should be made. In reading the reports of the cases of deciduoma, one or two cases occur to one's mind in which the symptoms were such that it seems not improbable that they may have been cases of this disease. In the absence of microscopic evidence and of a history of the ultimate fate of the patient, one cannot say more than that if at the time of their occurrence the subject of this disease had received the attention it has of late, it would have led to investigations being made with a view to excluding its presence. The knowledge that this rare condition has been observed, should lead to the careful investigation of all material removed from the uterus after curetting.

The much debated questions of its minute pathology do not appear to be of very great practical importance; the necessity of early operation and radical treatment is obvious, whether the neoplasm is carcinoma or sarcoma of the previously recognised types occurring in the uterus with a relation to pregnancy wholly accidental, or a distinct form developed from and containing decidual tissues.

At the April meeting of the Obstetrical Society of London,[1] two cases of deciduoma malignum were described—one by Mr. Alban Doran for Mr. Rutherford Morison, and one by Dr. Herbert Spencer. Dr. Eden also read a paper on the subject. Dr. Spencer's case occurred twenty-eight days after a normal labour, and ran the course described in other cases. After death an ulcerated and gangrenous growth was found at the placental site, the ulceration having nearly perforated the fundus. Secondary deposits were found in the cervix and lungs, and the character of the growth and secondary deposits was the same, being apparently a large-celled sarcoma with typical syncytium. Dr. Eden in his paper criticised the conclusions of other observers. He considered that the origin of the growth in the decidua was not proved, and that plasmodial masses

[1] *Brit. M. J.*, 1896, i. 976.

called syncytial are found in ordinary sarcoma of other parts of the body. He considered that Whitridge Williams's case was an ordinary sarcoma, and that there was no evidence to show that the uterine growth was primary. He suggested that Marchand's case following tubal gestation was due to primary growth in the tube unconnected with pregnancy, of which he considered there was no anatomical evidence. In the discussion[1] which followed, Drs. Kanthack, Clarence Webster, and Fothergill agreed in the main with Dr. Eden's criticisms. Dr. Fothergill considered that there was no proof that fœtal epiblast would form new growths and metastases. Mr. Bland Sutton considered that deciduoma was a sarcoma arising in decidual tissue. He felt sceptical as to varieties supposed to originate in chorionic villi. Mr. Alban Doran said that Mr. Morison's case was an instance of deciduoma malignum. He considered, however, that the malady could not be admitted to be distinct from sarcoma stimulated by gestation, while two cases quoted as deciduoma in the *Centralblatt für Gynäkologie* for May 2nd were more probably epithelioma. Dr. Spencer pronounced the view that the condition was that of a malignant growth developed from the products of conception. The general tenor of the debate seemed to be: (1) that the plasmodial masses were not necessarily syncytial, but found in ordinary rapid-growing sarcoma. (2) that syncytial masses could not be identified with accuracy merely from microscopic appearances; (3) that quite possibly many of the cases were sarcoma or carcinomatous growth stimulated by or developed soon after pregnancy, but not necessarily connected with the products of conception; (4) that it was yet too soon to add a new disease to the list.

WALTER C. SWAYNE.

Reviews of Books.

On the History of the Decline and Final Extinction of Leprosy as an Endemic Disease in the British Islands. By GEORGE NEWMAN, M.D. Pp. 149. London: Adlard and Son. 1895.

We have been much interested in this, which is No. 1 of the Prize Essays in connection with the National Leprosy Fund. Its perusal will remove from the mind of the reader the feeling that the active existence of leprosy in these islands has been much exaggerated, as the facts brought together by Dr. Newman

[1] *Brit. M. J.*, 1896, i. 1203.

will convince him that the incidence of this dire disease upon our ancestors was very extensive. No doubt many other skin affections were included under the term, but that cases of true leprosy — Elephantiasis Græcorum — were but too numerous there is undoubted evidence to show.

Dr. (afterwards Sir) J. Y. Simpson, in his *Edinburgh Medical and Surgical Journal* articles in 1841–42, to which Dr. Newman owns his indebtedness, showed that there is no ground for the belief that the disease was imported into this country by the Crusaders, as there is good proof that it was here as long ago as 60 B.C., and that prior to the Crusades at least three leper hospitals were in existence at Canterbury, Northampton, and Chatham. In 959, during the reign of Edgar, a law was passed making leprosy a valid ground for divorce. There must have been, at a moderate computation, not fewer than fifty leper hospitals established in this country before the end of the twelfth century, and they were supported by endowments, or alms, or fairs, or collections of money in the markets. It is of local interest to note that, according to Dugdale, "John Earl of Moreton, afterward King of England, gave a croft without Lacford-gate, upon the road to Bath, to certain poor lepers, whereupon was built an Hospital to the honour of St. John Baptist." [1] This, of course, was well outside the city. According to Dugdale there was about the same time also at Lawford's Gate another hospital, St. Laurence's. In William Wyrcestre's time there was, "on the west side of Radcliffe-hill," a leper hospital named after St. Mary Magdalene.[2] Dr. Newman refers to the leper hospitals of Bath, Exeter, Gloucester, Plymouth, and many other places in the West of England.

People of eminence had no immunity from the dire disease, for it is related that many members of royal and noble families were its victims. In the thirteenth century it seemed to have reached its height so far as England and Scotland were concerned, and the end of that century and the beginning of the fourteenth gave signs of its marked decline, and this declension extended to most parts of Europe also. Improved hygienic conditions tended to stamp out the disease, whilst the Famine of 1315 and the Black Death of 1349 were contributing elements. The hagioscope, or squint-windows in churches, are some evidence that a certain amount of separation was carried out. Through these "squints," of which Bridgewater furnishes the best example in this neighbourhood, the leper could be a spectator of the religious ceremonies. Dr. Newman says that "other churches possessed a stone slab let into the sill of the window, and so placed that the leper could receive without actual contact with the administrator of the Sacrament." In the time of Henry VIII. leprosy was far too rare to call for

[1] *Monasticon Anglicanum*, ed. 1830, vol. vi., part ii., p. 670.
[2] See Dugdale, *op. cit.*, p. 774.

more than a very few hospitals. In 1778 Gilbert White of Selborne writes: "A Leper is now a rare sight."

Dr. Newman gives two very interesting tables. The first one is divided into two columns, one relating chiefly to leprosy in England, and the other recording mostly the incidence of leprosy in other countries. The second, somewhat fuller than Simpson's similar table, contains a "List of Leper Houses established in the British Islands during the Middle Ages."

In comparing the various passages of the book we were much perplexed by the absence of an index. Dr. Newman's references, too, are provokingly inexact, *e.g.* "Camden Soc., 1863," and "Lysons, p. 348," are not very helpful.

Diphtheria and its Associates. By LENNOX BROWNE. Pp. xii., 272. London: Baillière, Tindall, & Cox. 1895.

So many communications to the medical journals, both at home and abroad, have been made during the last few years on diphtheria that a book unencumbered with unnecessary details, written without bias, and yet containing the most recent theories and discoveries, would not be out of place. So vast, however, is the amount of material to draw from, that no one can hope to bring out a book of even moderate size and yet contain all that should be present. Mr. Browne has made a laudable attempt, and has produced a readable and, on the whole, fairly complete treatise on diphtheria and its associates. His object has been throughout, as he tells us in his prefatory remarks, to indicate the necessity for the scientific expert and the clinician to work together, an essential concerning which all are now agreed. But we are inclined to think that the clinician is more frequently a general practitioner than a specialist on the throat; and in this opinion we are strengthened by Mr. Browne's admission that but for the kindly assistance of the Metropolitan Asylums' Board, his clinical experience of the disease would be small.

In such a book there must be many points on which different opinions might be held, and in a careful perusal we have come across several. We do not particularly refer by this to the treatment by antitoxin, which Mr. Browne relegates to the appendix, for since the publication of the book much additional evidence of its value has been brought out, but to many other little matters of detail of minor importance. For instance, Mr. Browne clearly distinguishes between diphtheria and pseudo-diphtheria, but appears to ignore the occurrence of a bacillus sufficiently resembling the true one in appearance to cause a little difficulty in diagnosis. He assumes that pseudo-diphtheria is a condition brought about by a micrococcus quite unmistakable with Löffler's bacillus; but the occasional occurrence of a bacillus which, though it may have nothing to do with the

morbid condition, so far resembles Löffler's as to have earned the name of pseudo-diphtheriticus is certainly worthy of some notice.

The illustrations are excellent, but would have been of more value to those inexperienced in bacteriology if the magnifying power had been stated.

Functional and Organic Diseases of the Stomach. By SIDNEY MARTIN, M.D., F.R.S. Pp. xvi., 505. Edinburgh: Young J. Pentland. 1895.

So many years have elapsed since an authoritative treatise on diseases of the stomach has appeared from British sources, and so much advance has been made in recent years in our knowledge of the pathology of disorders of the stomach, that this book will be perused with great interest. The gain in knowledge of gastric affections has chiefly resulted from the systematic examination of the gastric contents at various stages after a meal and in various diseases. Although a certain part of this work has been done in England, and much of the rest is accessible through translations, yet the bulk remains in German and French books and journals which do not come in the way of the general reader. The first question that occurs to one's mind on taking up this book is, then, whether it gives a satisfactory account of the best of all this recent work. On the whole, this question can be answered in the affirmative. The reader will find sufficient information as to what has been done in this direction, and sufficient guidance to enable him to apply these modern methods in his own practice. This section of the book is succinct, and the matter judiciously selected. The author has evidently limited himself to the consideration of those methods that can be used in ordinary practice, without involving a large expenditure of time or great difficulty of application. For further information on more elaborate methods of procedure the reader is referred to the memoirs of the original workers. On questions such as the importance and significance in diagnosis of the presence in excess or absence of HCl from the gastric juice, the author takes well-founded and judicious views.

The first chapters, dealing with digestion in the stomach, the digestibility of various articles of diet, the points to be borne in mind in the selection of food-stuffs and arrangement of dietaries, leave little to be desired. The next chapters on the pathology of indigestion are also excellent, and contain a large amount of valuable information.

Seeing the confusion that has arisen from the number and variety of digestive disorders described, the author has made an attempt to divide functional diseases of the stomach into two

groups, which he terms gastric irritation and gastric insufficiency respectively. He makes a further group—gastritis—to include those cases generally described as gastric catarrh. In gastric insufficiency there is diminution in the functional capacity of the organ without gross disease. The chapters on treatment of acute and chronic affections of the stomach are very good, especially with regard to the arrangement of the dietary in these cases. The last three chapters deal with dilatation, ulcer, and cancer of the stomach respectively. Of these, the one on ulcer is the best; that on dilatation does not deal sufficiently fully with the subject, perhaps partly because the author has incidentally considered minor degrees of dilatation in discussing gastric insufficiency and irritation. The chapter on cancer also hardly seems to us to enter thoroughly enough into all the aspects of this important disease.

Taking the book as a whole, it is much to be commended, and is especially good in the parts indicated above. We can recommend it to our readers as well worth reading, more particularly with regard to modern methods of diagnosis and treatment in gastric affections. The book is printed in large and clear type, and the work turned out in this publisher's usual excellent style.

Principles of Surgery. By N. SENN, M.D. Second Edition. Pp. xvi., 656. Philadelphia: The F. A. Davis Company. London: F. J. Rebman. 1895.

As five years have elapsed since the publication of the first edition of this work, the author has naturally found it necessary to add much new material, thus enlarging considerably the size and scope of the work; but the same originality and power have been displayed by Dr. Senn in the new parts of the book as in the old, and we can as warmly recommend the new edition as we did the former. More than fifty new illustrations have been added, and among them are five beautifully coloured plates showing stained bacilli. The *technique* of a number of operations is described and illustrated "for the special purpose of demonstrating, from a practical standpoint, the value of a thorough knowledge of the complicated reparative processes in the treatment of injuries and disease by surgical intervention."

The work is a model of what such works should be. It is written in a truly scientific spirit. Theory is maintained by experiment and illustration. The chapters on surgical tuberculosis should be read and studied by all surgeons and surgical students, for they teem with observations based on experiment and investigation, and are full of instruction and value. We know of no other book on the principles of surgery to compare with this one, which so worthily mantains the reputation of American authorship and publication.

Injuries and Diseases of the Genital and Urinary Organs. By Henry Morris, M.B. Pp. xvi., 478. London: Cassell and Company, Limited. 1895.

Mr. Henry Morris's previous work on surgical diseases of the kidneys was so good that we opened the present book with considerable expectations, which have not been altogether fulfilled by a careful perusal of it. A great many subjects are touched upon, but none of them seem to be dealt with in a thorough manner. The style of the book is dull, and partakes too much of the nature of a dictionary, while at the same time there is a seeming want of completion in many of the subjects treated. This is no doubt owing largely to the fact that no details are given of any operation recommended in the book, the reason given in the preface being the necessity of keeping the descriptions as brief as possible; but we think that by this omission the author has destroyed much of the usefulness of the work. Thus, in a work on diseases of the genital and urinary organs, surely we should look for some account of lithotomy and lithotrity, and for some description of the best method of removing an enlarged prostate gland; yet the work before us presents us with a mere outline of these operations, giving hardly any details, and simply signifying the particular operation most favoured by the author. These are serious omissions, and will render the book much less valuable as a work of reference than it otherwise would have been.

The author has taken care to bring the book up to date, and it presents us with an outline of the present knowledge of the diseases of the urinary organs in a condensed and handy form. It is evidently the outcome of a considerable personal experience, and bears evidence on every page of careful forethought and sound good sense. It is well illustrated with ninety-seven illustrations, many of which are entirely new and almost all of which are good.

A Smaller Atlas of Illustrations of Clinical Surgery. By Jonathan Hutchinson, F.R.S. London: West, Newman & Co. 1895.

This volume consists of one hundred and thirty-six plates, most of them being coloured, all of which have appeared during the last five years in the *Archives of Surgery*, but which are now first published in book-form, accompanied by descriptive letter-press giving an adequate explanation of each plate. Mr. Hutchinson, as is well known, is a firm believer in the value of pictorial illustration as an aid to the acquisition of clinical knowledge, and he has spared no pains in producing some of the most beautiful and life-like plates which have ever been published. A large proportion are of skin diseases, in which

the author takes such a keen interest, but many illustrate rare forms of disease, such as microcephalus, meningocele, unusual tumours of the breast, &c.

The great majority of the plates have been prepared from original drawings, executed under the author's own supervision, and we cannot but admire the energy and industry which have enabled him to collect illustrations of such rare and interesting diseases. We trust Mr. Hutchinson will be able to continue his collection, and give us the promised second volume of this valuable atlas.

Diet in Sickness and in Health. By Mrs. ERNEST HART. Pp. xii., 219. London: The Scientific Press, Limited. 1895.

The public and the profession alike will acknowledge that no one is better qualified to write on this topic than Mrs. Ernest Hart. Her book will convey much useful information to lay readers, and the many dietaries founded on good physiology of the latest type will be of aid to the medical practitioner. Sir Henry Thompson, in the preface, speaks highly of the book "because its accomplished authoress has the advantage of possessing not only a remarkable acquaintance with the various branches of medical knowledge, after many years devoted to their study, but also in no less degree that which has been conferred by long culinary and housewifery experience." The great variety of dishes suggested for the diabetic and the gouty renders their necessary limitations by no means irksome.

In a work of this character we are sorry to see several advertisements bound in, even although they are included under the euphemistic title of "Appendix." The book is too good to be thus disfigured.

The American Year-Book of Medicine and Surgery. London: The Rebman Publishing Co. (Ltd.) Philadelphia: W. B. Saunders. 1896.

This volume, of 1183 pages, is described as a yearly digest of scientific progress and authoritative opinion in all branches of medicine and surgery, drawn from journals, monographs, and text-books of the leading American and foreign authors and investigators. The matter has been collected and arranged, with critical editorial comments, by twenty-seven editorial colleagues under the general editorial charge of Dr. George M. Gould. It is a handsome volume, issued in most modern style, with blue cloth covers and red edges, profusely illustrated with numerous woodcuts in the text, and thirty-three handsome half-tone and coloured plates, and is the first of a series likely to be known as "Gould's Year-Book"' and its general design is to give in a compact form an "annual summary of medical progress."

It is confidently believed that no very significant fact has escaped review, and the task of condensation into one volume has been a very onerous one. More than half of the editorial staff are leaders of the profession in Philadelphia, many of them having already a world-wide reputation; four are well-known specialists in New York, and four in Chicago, two in St. Louis, two in Cleveland, and one in Columbus, Ohio.

It will be obvious that a book built up in this way deserves more than a casual inspection, and the further one goes into the contents the more is one convinced of the care with which the work has been compiled. The special training and experience of the staff has enabled them to call forth a great degree of judicial criticism, which prevents the reader from being bewildered by a heterogeneous mass of abstracts recording little real advance in knowledge or improvement in treatment.

In a complex work like this there cannot fail to be inconsistencies. For instance, we notice (page 66) that, alluding to Dr. Pavy's new views on the carbo-hydrates, "throughout his lectures there is the evidence of careful and painstaking work, and it is not unlikely that future investigations will show the soundness of Pavy's observations," whereas we find (page 1093), in allusion to Dr. Noël Paton's criticism, that "the resume [*sic*] of the evidence in favor of the orthodox view of the constant production of sugar in the liver and its disappearance in the circulation is compact and convincing."

A three-column index of 55 pages is a necessary part of the volume, and the references are throughout at the bottom of the pages rather than collected at the end. We notice very few errors or inaccuracies, but many innovations in spelling have been made by the editor. Some of these we should like to correct, but they are made "in the interest of much-needed brevity and simplicity."

We heartily congratulate the editor on the volume for 1896, which it will be difficult to surpass.

A Few Medical and Surgical Reminiscences. By AUGUSTIN PRICHARD. Pp. 99. Bristol: J. W. Arrowsmith. 1896.—The writer of this little book is endowed with a vivid and retentive memory, which has enabled him to put on record some delightful "reminiscences." A graphic description of his early youth and education is one of the most interesting parts of his book. Mr. Prichard had the good fortune to be well-born and well-bred on both sides for his intended profession. Medicine was represented by his father, the celebrated Dr. James Cowles Prichard, whose work, *The Researches into the Physical History of Man*, gained him an European reputation and the Fellowship of the Royal Society. Surgery was represented by his maternal uncle, Mr. John Bishop Estlin, the founder of the Bristol Eye Dispensary,

and to whom Mr. Prichard, while still at school at the Bristol College, was apprenticed in 1834. In 1836 he entered the Bristol Royal Infirmary as a medical pupil under his father, and soon afterwards as a surgical pupil under Mr. Harrison. Mr. Prichard gives an entertaining description of the effect which, in his pupil days, the theories of Broussais had on the treatment of inflammatory diseases, resulting in the innumerable bleedings, cuppings, and leechings which formed the regular routine of infirmary practice at that time, but which remedies, especially when applied locally, have in the present day fallen too much into undeserved oblivion. Dr. Prichard being of such general culture and well versed in foreign languages, would be fully alive to the advantage of Continental travel for his son, and accordingly Mr. Prichard, after attending at St. Bartholomew's, continued his medical education at Berlin (where he took the M.D.), Vienna, and Paris. We get very interesting reminiscences not only of many of the great physicians and surgeons of London during the time Mr. Prichard was a student there, but also of Dieffenbach, Müller, Rokitansky, Jäger, Cruveilhier, Louis, Civiale, Velpeau, and many others. In 1842 he returned to Bristol and began practice. Mr. Prichard's pictures of medical men and manners fifty years ago are admirable portraits, full of life and character; and all his descriptions are pervaded with a quiet humour which renders the book exceedingly readable. An excellent photogravure portrait of the writer forms the frontispiece to his volume.

The Medical Digest. Appendix, including the years 1891–2–3–4, and to August, 1895. By RICHARD NEALE, M.D. London: Ledger, Smith and Co. 1895.—Neale's *Medical Digest* is too well known to require a long notice. This supplementary volume is a welcome one, and we heartily recommend to every member of the profession this "busy practitioner's *vade-mecum*." Although to a large extent superseded by fuller and more recent bibliographies, its arrangements are so simple that little time is necessary to find a required reference in the periodicals with which it deals. This volume, like its predecessors, is provided with an excellent index. It has two pages of *corrigenda* of the 1890 edition.

Elements of Practical Medicine. By ALFRED H. CARTER, M.D. Seventh Edition. Pp. xvi., 552. London: H. K. Lewis. 1895.—That this concentrated extract of medicine is clearly appreciated is shown by the fact that in fifteen years six large editions have been sold. As a simple introduction to the study of medicine it quite fulfils the aim of its author, and he who has digested it well cannot fail to have acquired a taste for more.

An Essay on Malaria and its Consequences. By ROBERT LINDSAY, M.B. Pp. 116. London: H. K. Lewis. 1895.—This monograph by Dr. Lindsay, a retired surgeon of the

Army Medical Department, is an attempt to show that all our preconceived ideas about malarial fevers are entirely in the wrong. The book takes no notice of the work which has lately been done by Laveran and others. It ignores entirely the discovery of the malaria bacillus in the blood, and attributes the whole of the morbid phenomena of malaria to an excess of carbonic acid in the atmosphere. The author draws an analogy between the symptoms of acute poisoning by carbonic acid gas and those observed in malarial poisoning, both acute and chronic, and founds upon this his theory that malarial fevers and all their complicated sequelæ are neither more nor less than the expression of the effect of continuous poisoning of the blood by carbonic acid. This is the theory, very feebly sustained. It is needless to say the deductions from it are equally feeble. The treatment of malarial fevers is to be radically altered; quinine is to be given up; the bromides and the chlorides are the author's anchors of hope. It is useless to say more. It is a pity such books are written.

On Dreamy Mental States. By Sir James Crichton-Browne, M.D., F.R.S. Pp. 32. London: Baillière, Tindall and Cox. 1895.—In this, the Cavendish Lecture delivered before the West London Medico-Chirurgical Society, we have a consideration of some of those indefinite mental conditions which are on the borderland of pathology, and some of which are very common, although not often described. One is, in Dickens's words, the "feeling which comes over us occasionally of what we are saying or doing having been done in a remote time, of our knowing perfectly well what will be said next, as if we suddenly remembered it." Another is the curious impression of loss of personal identity which has been described by various writers, *e.g.* Tennyson and John Addington Symonds. These states involve, we are told, "disorder of mind, trifling and transient no doubt, like cramp of a few fibres of a muscle, but disorder nevertheless;" and they may be looked upon, the lecturer informs us, as allied to the milder forms of *petit mal*. Connected with this are the feelings experienced just before chloroform and nitrous oxide anæsthesia, which consist frequently in "convictions of emancipation, relief, and happiness, in grand and sublime ideas." These and kindred conditions are described and discussed in a most interesting manner, and with a command of language which makes the most intricate psychological phenomena as clear as such things can be made, for they baffle accurate analysis. "Plunges they are into those depths of outer mystery in which the certitudes of Science lose themselves, and out of which, it has been said, the certitudes of faith arise."

On Appendicitis, and on Perforation of Gastric and Duodenal Ulcer. By Gilbert Barling, M.B., B.S. Pp. 92. Birmingham: Cornish Brothers. 1895.—This book consists of the 1895

Ingleby Lectures, reprinted from the *Birmingham Medical Review*. It contains much that is good, though not much that is new. The author, in common with most British surgeons, takes an eminently conservative view of the treatment of appendicitis, and is by no means disposed to advise the radical methods advocated on the other side of the Atlantic. The recommendations are sound and are marked by much good sense, and the practical surgeon may find many useful hints by a careful perusal of these lectures. The author should have provided his reprint with an index.

Observations on Congenital Dislocation of the Hip. By BERNARD E. BRODHURST. Second Edition. Pp. 19. London: J. & A. Churchill. 1895.—The author says that fifty-two cases of this form of dislocation have come under his care during the last thirty-five years. He maintains that they are for the most part traumatic, and are either produced *in utero* or more commonly at birth. He advocates operation whenever an acetabulum can be made out by an exploring needle. The essay is a very good summary of what is known of this curious affection.

Methods of Operating for Cataract. By Surgeon-Captain G. H. FINK. Pp. 77. London: J. & A. Churchill. 1894. —This little book is based upon the results of some five hundred operations. Iridectomy, as part of the operation, is recommended with hard well-matured cataracts, not with cortical and fluid cataracts. The author advises it if there is any suggestion of inflammation in the cornea, or any tendency towards glaucoma. Where everything is favourable he advocates no iridectomy. He applies a plaster to tightly seal the lids together, allowing drainage from the conjunctival sac by means of slits through the plaster opposite the canthus. The plaster is left for four days; it is then replaced by a pad and bandage, and at a week after the operation by a shade only. Our author does not hesitate to extract cataract from both eyes at one sitting; but the occurrence of 6 per cent. cases of suppuration is a large proportion, particularly as he is an enthusiastic disciple of Listerian principles.

Regulations as to Defects of Vision and other Physical Defects which Disqualify Candidates for Admission into the Civil or Military Government Services. By N. C. MACNAMARA. Pp. 31. London: J. & A. Churchill. 1895.—This valuable monograph gives good rules for deciding whether a boy is likely to fail by physical imperfections from qualifying for some selected branch of the Government service. The regulations regarding eyesight are thoroughly traversed. Points to be observed regarding physical defects and the method in which physical examination is conducted are well discussed and explained. Such a manual should be consulted by all who propose to enter a boy for the

public services before the school curriculum is modified, for a physical standard is necessary as well as an intellectual one.

Notes on Surgery for Nurses. By JOSEPH BELL, M.D. Fourth Edition. Pp. 180. Edinburgh: Oliver and Boyd. 1895.—The fact that this little work has reached a fourth edition proves that it has been appreciated, and we do not doubt that it will continue a favourite companion of nurses and probationers. A chapter has now been added entitled "General Advice to Nurses," which contains much good sound common-sense, and which will render the book still more useful to those for whom it is designed.

Guy's Hospital Reports. Vol. LI. London: J. & A. Churchill. 1895.—The present volume is a smaller one than usual, and is scarcely equal in interest to some of its predecessors. Mr. Thomas Bryant contributes a short paper on "Temperature after Operations," showing that he had obtained very good results after most of his operations without the use of the carbolic spray, but with the use of iodine water for washing the wounds. Dr. Theodore Fisher contributes an important paper on "Hypertrophy of the Heart without Gross Organic Lesion," in which he maintains that overwork and addiction to alcohol are frequently the causes of considerable hypertrophy of the heart without any valvular disease or other organic lesion. The paper is illustrated by numerous clinical and pathological records from the Bristol General Hospital and from Guy's Hospital. "A Case of Multiple Atrophying Sarcomata of the Head and Neck," by L. A. Dunn, is interesting, and so are papers by F. Newland-Pedley on "The Treatment of Suppuration of the Maxillary Antrum" and "On the Treatment of Congenital Cleft Palate."

King's College Hospital Reports. Vol. I. London: Adlard and Son. 1895.—We congratulate the editors of this new set of hospital reports on the general excellence of the first volume. It contains several interesting original papers and the reports of each department of the hospital, with full accounts of some of the most valuable cases. The volume will be of special interest to old King's College men, but it is well worthy of perusal as a record of work fully up-to-date in all particulars.

Medico-Chirurgical Transactions. Vol. LXXVIII. London: Longmans, Green and Co. 1895.—This volume contains no less than fourteen monographs on a variety of topics, of which perhaps the most noteworthy is that on the influence of heredity in phthisis, by Dr. J. Edward Squire, who states that the analysis of 1000 cases warrants the opinion "that the hereditary predisposition in the case of phthisis is not a direct predisposition to this malady, but merely the general predisposition to disease which belongs to the offspring of weakly

parents, a predisposition which the children of phthisical parents have in common with those of parents whose health is lowered by other conditions. The families of consumptives have, however, the disadvantage, not shared by the delicate children of non-phthisical parents, of living in constant association with a source of infection."

Transactions of the Grant College Medical Society, Bombay. From January to December, 1894. Bombay: The "Tatva-Vivechaka" Press. 1895.—We are glad to receive this record of the activity and energy of the 168 members—for the most part Indian—of the Grant College Medical Society at Bombay. It contains the report of a lengthy debate on Pasteurism and Bacteriology. If there should be another volume in the future, it should have a table of contents and an index.

Intercolonial Medical Journal of Australasia. Melbourne: Stillwell & Co.—This new monthly, beginning its issue with the present year, results from the amalgamation of the *Australian Medical Journal* and the *Intercolonial Quarterly Journal of Medicine and Surgery*. It is intended that the new journal shall be truly federal in character and absolutely free from the taint of localism. The medical profession throughout Australasia are invited to become contributors and subscribers to a journal which has an excellent editorial staff, and which should have the confidence of a very wide constituency.

Ἰατρικὴ Ἐπιθεώρησις. Athens: 40 Rue Zinonos.—We offer a word of warm welcome to a recent addition to the ranks of cosmopolitan medical literature. It has been strongly urged that modern Greek should be employed as the medium of universal scientific intercommunication—a suggestion which seems highly reasonable after the perusal of some numbers of this weekly journal, the first number of which appeared at the beginning of the year. A paragraph in the issue for January 31st, 1896, headed "*Ἡ ἀνακάλυψις τοῦ* Röntgen.—*Ἡ διὰ μέσου στερεῶν σωμάτων φωτογράφησις*" suffices to show how the language of Hippocrates and Aristotle has been expanded to meet the requirements of modern science and medicine. Our contemporary does not present much material originating in Athens; neither Greek Society nor meeting is reported in its columns, and the Medical School and Children's Hospital are the only institutions we see mentioned. The two Professors who superintend the publication supply the only original work, the rest being made up mainly of reports of Parisian societies and extracts from other journals. This, as well as the matter of printing and correcting for the press, no doubt will improve with time. We wish *Medical Observation* all success!

The Medical Annual. Bristol: John Wright & Co. 1896.—This is an exceedingly good number of this well-known *Annual*. It contains a large and well-selected amount of information

respecting new remedies and new methods of treatment, gathered from the writings of numerous authors. It also contains some very useful original articles written by specialists in different departments of medical work. Naturally, these articles vary in value directly with the practical acquaintance with the special work to which they refer; but even where they are produced by abstracting from the published work of men of more experience than their authors, yet this abstracting has been well done. The volume is well illustrated, and some of the illustrations are excellent; and even cycling has a special chapter devoted to it. We thoroughly recommend the book as one that contains a great amount of information, which is given to us in a readable style. It would be an improvement if a uniform method were adopted in quoting the references, and if the nomenclature of the *Index Medicus*, the best existing bibliographical standard, were employed for the titles of the journals.

Archives of Clinical Skiagraphy. By SYDNEY ROWLAND. Vol. I., Part I. May, 1896. London: The Rebman Publishing Company, Limited.—It is characteristic of the present generation that an invention or discovery which half a century ago would have required years for its full development is nowadays often matured in as many months. Of this we have recently had a striking example in the "New Photography." Although it is only a few months since Röntgen announced his discovery of the X rays and their property of penetrating more or less completely substances opaque to ordinary light, the application of this property to the photography of the bones and other dense portions of the human body has already passed its first purely experimental stage, and is coming to be a recognised aid to medical diagnosis. Mr. Sydney Rowland, who is well known to readers of the *British Medical Journal* as an able exponent of the new art (named by him Skiagraphy), has just published the first number of the *Archives of Clinical Skiagraphy*. This he describes as "a series of collotype illustrations with descriptive text, illustrating applications of the New Photography to medicine and surgery." It contains excellent skiagrams of the body of a child aged three months (showing that the intestines, heart, and liver cast shadows as well as the bones); of an arm with syphilitic disease of the radius; of a hand with needle in one of the fingers; and of the hand and knee-joint of a girl suffering from multiple exostoses. In connection with the latter, Mr. Rowland points out that the diseased bones are unusually transparent to the X rays. The same thing was noticed in a similar case recently photographed at University College, Bristol. So marked was the effect, that after several attempts had been made a normal knee was photographed for comparison before it was realised that the bone and not the apparatus was the cause of the faintness of the bone-shadows. It is, we think, a pity that Mr. Rowland has painted out the tissues before

printing his negative of the knee-joint, as the absence of contrast between them and the bones is thereby missed. The practice of touching up negatives taken for scientific purposes always tends to shake one's faith in their accuracy. The printing and paper of the *Archives* are all that can be desired, and the reproductions of the skiagrams clear and good. A neat portfolio is provided for containing the numbers.

The Advertiser's ABC. 1896. Pp. 1162. London: T. B. Browne, Ltd.—Some years ago we had the opportunity of reviewing a previous edition of this magnificent volume, and spoke in high praise, not only of the value it must be to all advertisers, but also of the beautiful manner in which the book has been produced; and in these respects the present issue is no whit behind its predecessors. Its coloured reproductions of magazine covers and reduced facsimiles of newspaper pages are specially attractive. There is an article at the commencement of the book, entitled "Non-Advertising Professions," in which the medical, amongst others, comes in for severe castigation. We cannot here discuss the *pros* and *cons* of advertising by medical men of their powers to cure certain diseases, &c., as the writer wishes them to do, but we can assure him that though it may not be done through what he would call the legitimate channel—*i.e.* the advertising agent,—it is done to no inconsiderable extent by other means, which reflect little credit on the advertisers. The writer's case is not made stronger by his sympathetic references to two notorious quacks whose names have been removed from the *Medical Register* for "infamous conduct in a professional respect," *i.e.* advertising their nostrums and reputed cures in lay papers. We hope we shall not see the day when medical advertising is considered anything else than it is now—an ignoble and debasing act, and one unworthy of a great and noble profession. In a work of this magnitude there must, of course, be errors; but *The Journal of Anatomy and Physiology* ought not to have been named as one of the "new ventures" of 1895. On page 386 a mistake has occurred in the name of our Editorial Secretary.

Notes on Preparations for the Sick.

Lysidine.—Jeyes' Sanitary Compounds Co., Ltd., London.—This new solvent for uric acid is the 50 per cent. aqueous solution of a crystalline but very hygroscopic organic base allied to piperazine, but having five times its solvent power on uric acid. Professor Gerhardt of Berlin speaks well of it. The dose is 30

grains, daily increasing to 150 grains. It is said to be best given in a pint of aerated water.

Ethyl Phosphinate of Pyridin.—LORIMER AND CO., London.—This preparation is said by its promoters to possess "all the beneficial properties of **Pyridin**, whilst it is presented in an attractive and agreeable form, so combined that, whilst it destroys the bacilli, absorbs tubercle and allays irritation and inflammation, it also subdues cough and soothes the nervous system, whilst it checks night perspirations, improves the appetite, adds weight, and produces healthy lung-tissue; in short, it does in and by itself all that is wished for in the alleviation, arrest, and cure of consumption." No one who knows anything about phthisis will believe all this. Such statements are easy to make, but they are not easy of proof. We venture to maintain that few of the above theoretical statements have yet been proved, but we accept the statement that the fluid is attractive and agreeable.

Vichy; "Big Rapids" Medicinal Water.—Messrs. INGRAM AND ROYLE have sent us specimens of these. The old State springs of **Vichy**, and the ordinary brands emanating therefrom, need no description. The modern preparation, in tabloid form, the "Comprimés de Vichy," will be found a very convenient way of producing a more or less effervescing and warm glass of Vichy (*sources de l'état*) similar to the water as it comes from the natural spring. Three *comprimés* should be dissolved in a glass of ordinary warm water, or distilled water will give a more accurate imitation of the original. There appears to be no necessity for the importation of large quantities of plain or distilled water.

The "**Big Rapids**" sample is described as "the strongest natural mineral water known," and the bottle is marked "Clark's red electric natural medicinal water." The water should be potent. It is not a purgative, and it contains only traces of iron; but the chlorides of sodium, magnesium, and calcium are so abundant that the specific gravity, after diluting to 10 volumes, is as high as 1024. It is odourless, colourless, and clear, and it should be of service in all gouty conditions by favouring elimination. How a concentrated brine can be spoken of as "pleasant to the taste" we fail to understand. Sea water is infinitely more palatable.

"Frame Food" Stamina Tablets.—FRAME FOOD CO., LTD., London.—These tablets, flavoured with liquorice, are made of Frame Food extract, which contains 10 per cent. of soluble wheat phosphates. They are sustaining, and are easily carried in the pocket; hence their utility and convenience for travellers whose opportunities for ordinary meals may be inadequate. There is

no danger that they will take the place of more ordinary foods at leisure moments, for they require efficient dental crushing machinery, without which the "meal in the waistcoat pocket" cannot prevent starvation in the midst of plenty.

Beef Juice.—JOHN WYETH AND BROTHERS, London.—This dark-red and somewhat viscid fluid has, after dilution to six times its bulk, a specific gravity of over 1040. It contains a high percentage of albumen, amounting, as estimated in the picric acid tube, to about 3½. Its bright arterial-blood colour, lost by boiling, and the appearance after much dilution of the spectroscopic bands, show the presence of hæmoglobin. Chemical analysis indicates the presence of kreatinin, glycogen, tyrosine, and salts (especially sodium chloride). This meat extract is clearly something more than a stimulant; it must possess a considerable nutrient value, and be of service when taste and sight do not raise any difficulties in its administration.

Viking Meat Juice.—The VIKING FOOD AND ESSENCE CO., London.—This preparation is a thick fluid having a sp. gr. of about 1240, and a red hæmoglobin colour. A teaspoonful in a wineglass of cold water makes a very palatable drink; but boiling water precipitates the soluble albumen, which is shown by the picric acid tube to amount to 1 per cent. Like all juices of this kind, the amount of nutrient available for tissue formation in a teaspoonful dose must be very small; but as a stimulant for the production of physiological energy, both experience and theory prove it to be useful.

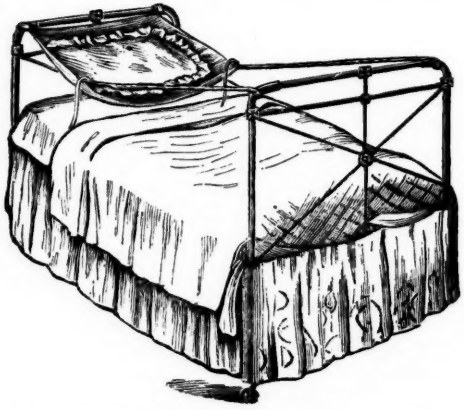
Bi-palatinoids of Fehling's Test.—OPPENHEIMER, SON AND CO., LTD., London.—We have given these a good trial, but we cannot recommend them, as the organic pellicle causes some decomposition of the fluid in the absence of sugar.

Cachets; Sinapine Tissue.—COOPER AND CO., London.—These **Cachets**, of different sizes, of varying colours, and with coloured inscriptions, made with the "Finot" cachet machine "with cups," are the most elegant mode of mounting medicinal powders which we have hitherto seen. The tints of the cachets with inscriptions to match are extremely neat. The cachets themselves are of small dimensions. They are flexible, tasteless, and readily soluble, and their dimensions vary from the smallest, capable of containing 5 grains of antipyrin, up to the largest, containing 28 grains. Many drugs dissolve more easily and therefore act more quickly when taken in powder form in cachet rather than in compressed tabloid or coated pill.

Sinapine Tissue is an improved mustard plaster that never blisters the skin. It consists of a tissue-paper saturated with mustard, and has the advantages of being convenient, always ready, and not too powerful. It is supplied in sheets, from which a piece of the desired size can be cut.

Plasters: Seabury's Rubber Adhesive; Mead's Rubber Adhesive; Belladonna; Cantharidal; Capsicum; Mustard; Muslin and Silk; Isinglass; Surgeon's Transparent Dressing.—SEABURY AND JOHNSON, New York.—Specimens of these have been sent to us by Messrs. Fassett and Johnson, who are the agents in this country for them. They are all of excellent quality, and are conveniently sent out either on reels or enclosed in paper envelopes. They are known as Mead's or Seabury's plasters, and they are so prepared as to keep good in any climate. The **Belladonna Plasters** are perforated, and can be worn without the slightest inconvenience, the material on which they are spread being light and fitting closely to the inequalities of the skin. Plasters when prepared like these are indeed a revolution from the old-fashioned plasters formerly in use in this country, and which were usually spread by the surgeon himself, or his apprentice, as they were required.

The Oriole Pillow Sling.—LIPSETT AND CO., Liverpool.—This device, suggested by Miss Weatherly of Portishead, from her own experience of the things which add to the comfort of



an invalid, is a simple but nevertheless a very decided improvement on the ordinary bed-rest. Its nature and the mode of its application can be seen from the illustration.

MEETINGS OF SOCIETIES.

Bristol Medico-Chirurgical Society.

March 11th, 1896.

Mr. ARTHUR W. PRICHARD, President, in the Chair.

Dr. F. H. EDGEWORTH showed two patients. The first was a man, aged 29, suffering from a neuritis of the median nerve of the right arm, resulting in wasting, some loss of power and reaction of degeneration in the muscles innervated, and partial anæsthesia in the skin area supplied. The nerve was tender on pressure both at the elbow and wrist. The interest of the case lay in its etiology. The man is by trade a bootmaker, and was in good health until four months ago, when he for the first time began to work with a machine called an "edge setter," which consists of a rapidly vibrating block of steel against which the edge of the sole of a boot or shoe is held to smooth and polish it. The vibration is felt most disagreeably throughout the whole body, though more especially in the right forearm. Soon after working at this machine he began to experience a weakness in the right arm, which gradually increased so that in about a month he had to give up this branch of his trade. His arm then got better, but again became weaker when two months later he was obliged to use the machine once more. No other cause for the neuritis could be found. The patient says that men who begin to work with this edge setter are apt to experience a temporary weakness in the right arm; but he does not know any case so well marked as his own. It seems fairly clear then that the neuritis is of traumatic origin, set up by the vibrations of the machine. The condition had considerably improved with massage. The second case was one of ataxic paraplegia in a man aged 43. The disease was of slow origin and of about five and a half years' duration. There was a spastic paraplegia of the legs, evidenced by weakness, spastic gait, and exaggerated knee-jerks, with rectus and ankle-clonus on both sides, though a little more marked on the left. In addition there was well-marked ataxy. The bladder and rectum were slightly affected. The disease was to be differentiated from locomotor ataxy by the exaggerated knee-jerks, absence of lightning pains, and normal pupillary reactions, and there was no history or sign of syphilis; whilst it was unlike spastic paraplegia in that ataxy was present. Myelitis was excluded by the chronic and progressive course.—Dr. WATSON WILLIAMS, commenting on Dr. Edgeworth's case of ataxic paraplegia with exaggerated knee-jerk, referred to two recently recorded cases in which the patellar tendon-reflexes reappeared owing to the onset of descending degeneration in the lateral tracts; viz.: a case of locomotor ataxia, under Raichline, in which, with the onset of left hemiplegia with secondary contracture, the left knee-jerk reappeared; the other instance being that of a diabetic patient, observed by Marinesco, in whom Weber's syndrome (superior crossed hemiplegia) supervened, with the reappearance of the lost knee-jerk on the affected side.—Dr. HENRY WALDO asked Dr. Edgeworth if he had any experience of the hypodermic injection of strychnine in cases of peripheral neuritis. It had been much praised by Grainger Stewart, and Dr. Waldo had found

it valuable in some cases.—Mr. C. A. MORTON asked why, supposing the neuritis was due to the vibrations, the median nerve only had suffered.—Dr. MICHELL CLARKE said that the ataxic patient had been under his care for some time previously, and that he agreed with Dr. Edgeworth that the case was one of ataxic paraplegia. The symptoms were practically the same two years ago as now; the ataxy was then relieved for a time by suspension.—In reply Dr. EDGEWORTH said that in reference to the case of neuritis, he could offer no explanation why the median nerve alone was affected. The hypodermic use of strychnine was not indicated in this case, as there was much local tenderness and inflammation, and improvement was considerable under the treatment adopted. The first case of locomotor ataxy with absent knee-jerks in which a hemiplegia had brought back the knee-jerk had been, he believed, recorded by Hughlings Jackson and Taylor. The existence of a knee-jerk in a person suffering from ataxic paraplegia showed that the sclerosis of the posterior columns could not be complete; for, if complete, the muscle reflex arc would be broken, and no amount of lateral sclerosis would bring it back.

Dr. BERTRAM ROGERS showed an anencephalous monster which had been sent to the Children's Hospital by Mr. John Griffiths, in whose practice the case occurred. The woman was a primipara (as is usually the case), and went to the seventh month before the confinement came on. The fœtus presented by the head, and was born without difficulty—the mother making a good recovery. No maternal impressions are alleged to have caused the monster. The fœtus is without brain, and only a small string of spinal cord is apparent down the open spinal column; and it presented the other usual features of these monsters, such as absence of neck and exophthalmos.—Dr. JOHN BROOM related a case which had occurred in his practice. The labour was at full term and was natural. There was neither cerebrum nor cerebellum, the skull being lined only by an extension of the dura mater from the medulla oblongata which terminated just within the foramen magnum. —Dr. J. G. SWAYNE said that the anencephalous fœtus shown resembled most specimens he had seen, except that the amount of brain was less developed than usual.

Dr. THEODORE FISHER showed two specimens. The first was one of hæmorrhagic pancreatitis which occurred in a woman, aged 56, who died of hæmorrhage into the right optic thalamus. The pancreas was dotted over with small hæmorrhages, and section showed blood infiltrating the interstitial tissue of the gland, and the lobules of reddish-grey colour, which microscopically showed disintegration of the cells. The kidneys were small and granular, and there was general arteriosclerosis; but the heart was not enlarged. This case had not the clinical interest of most cases of the disease, because it occurred as a complication of cerebral hæmorrhage and was in all probability not the cause of death. The second specimen was one of thrombosis of the superior vena cava above the vena azygos major, and of the right and left innominate veins. The cause of the thrombosis was not obvious. There were some enlarged reddened glands in the mediastinum, and microscopically the mediastinal tissues showed proliferation of the fat-cells and small-celled infiltration. Possibly this inflammation of the mediastinum was primary, and the cause of the thrombosis. —Dr. SHINGLETON SMITH spoke on the clinical aspects of the case from which Dr. Fisher's second specimen was taken. The patient, a middle-aged woman, was admitted with symptoms of obstruction of the superior vena cava; but there were no indications of aneurysm

or any other intra-thoracic tumour. The only point of importance in the history of the patient was the fact that there had been eleven miscarriages (with no child born alive), although there was no other evidence of syphilis; whether this thrombosis was primary or dependent upon some chronic mediastinal inflammation seemed difficult to determine.—In reply Dr. FISHER said that there was no evidence that the inflammation of the mediastinum was gummatous. There was very little fibroid thickening and no caseation.

The PRESIDENT showed a six months' fœtus, and the uterus which he had removed from a patient whose abdomen had been penetrated by a revolver bullet. The bullet had entered the child to the right of the spine about the neck of the eighth or ninth rib, and the exit-wound was in the costal cartilages of the same side, the shot thus passing through the pleura, diaphragm, and liver; the placenta also was perforated. The case was fully reported and illustrated in the *British Medical Journal* of February 8th, 1896.—Dr. J. G. SWAYNE said that Mr. Prichard's case was exceedingly interesting from an obstetrical as well as from a surgical point of view. When he began lecturing on Midwifery, more than fifty years ago, Naegele's view as to the relative frequency of the different cranial presentations prevailed almost universally in Great Britain. Dr. Swayne doubted its correctness from the first, and was soon led to disbelieve it in consequence of meeting with a number of cases in which he found the child to lie in the second position, even before labour had commenced. Had a kind of *experimentum crucis* been needed to prove this, a better case than Mr. Prichard's could not have been selected.

Dr. BERTRAM ROGERS gave a demonstration of Soxhlet's milk steriliser. —Dr. SHINGLETON SMITH was not convinced of the advantages of a special process of sterilisation over ordinary boiling. If milk could be obtained fresh and was likely to be consumed within a reasonable time, there was no necessity for sterilisation; but he quite approved of the habitual practice of boiling all milk before use. Ordinary boiling was an efficient method of sterilising, and other more elaborate methods did not appear to have any advantages over it for ordinary every-day use. The coagulation of albumen, and the change in the taste, must occur with any process of sterilisation, just as in ordinary boiling.

Mr. C. W. J. BRASHER recorded "A Case of Ligature and Division of the Vasa Deferentia for Prostatic Hypertrophy" (see p. 150).—Dr. JAMES SWAIN referred to Professor White's statement that atrophy of the prostate ensued after ligature of the spermatic cord as a result of atrophy of the testes, and to the experiments of Griffiths and others which showed that atrophy of the testes and prostate did not usually follow ligature or division of the cord except in a few instances. Experiment, therefore, tended to show that we could not expect atrophy of the prostate from ligature of the spermatic cord. It was not always allowable to argue from dogs and rabbits to human beings: and there had now been reported a fair number of cases in the human being in which prostatic atrophy *had* followed ligature of the spermatic cord. If these cases were further supported by others, we may have to reconsider the aspect of castration as opposed to ligature of the cord for hypertrophy of the prostate. For in favour of the latter operation we have (1) a lessened shock; (2) the retention of organs which may possibly serve other purposes in the economy than fertilisation of the ovum; and (3) it satisfies the æsthetic objections of those who decline to lose their testicles, even though celluloid balls can be supplied to take

their place. Mr. Harrison's recently published cases [1] went to show that it was only necessary to tie the vas deferens and not the vascular elements of the cord as well, as Mr. Brasher had done. This too was borne out by the more recent experiments of White,[2] in which atrophy of the prostate had been produced in dogs after division of the vas deferens without any apparent change in the testes. The method of operating adopted by Harrison is simple. He isolates the cord just as it is entering the scrotum, raises the vas deferens in a loop with a blunt hook, and then ties a ligature round the loop, which is afterwards cut away. Dr. Swain thought that this operation might be done, if desirable, under the influence of cocaine without the use of a general anæsthetic.—Mr. C. A. MORTON thought that whereas castration for prostatic hypertrophy had passed out of the experimental stage, and could be recommended to patients with confidence in properly selected cases, division of the vas deferens was still only in the experimental stage, and that the evidence as to its value was extremely conflicting. He referred to the observation made by Hunter many years ago, that in a body in which, on dissection, the vas was found obliterated, there was no atrophy of the testis; and to Brissaud's experiments on rabbits, which showed that if after ligature of the vasa deferentia the animals were placed by themselves no atrophy took place in the testes; but if placed with the does, the testes, after first enlarging, atrophied from the pressure of the excessive secretion in the tubes on the epithelium. Mr. Brasher's case was distinctly more successful than some of Mr. Harrison's.—Mr. W. M. BARCLAY considered that Mr. Brasher's operation had been so far very fairly successful, inasmuch as the diminution in the size of the prostate and the effect on micturition were considerable. He then referred to the experiments of Dr. White on dogs, in which ligature of the vasa was uniformly followed by marked atrophy of the prostate, without, however, causing atrophy of the testicles. Supposing these results to be transferable to the human subject, the absence of testicular atrophy was quite the opposite of a disadvantage. The cases so far recorded of ligature of the vasa are too small for a decision for or against the proceeding; but this case certainly was one in its favour. At any rate, it seems legitimate surgery to give the patient his choice, pointing out the greater certainty of orchectomy, as far as our present knowledge goes; and supposing the operation to fail, removal of the testicles can follow.—Mr. BRASHER, in reply, said that ligature of the spermatic arteries seemed in this case to have resulted in the earlier relief of the prostatic congestion.

Mr. C. A. MORTON reported "A case of Supra-vaginal Amputation of the Cervix for Carcinoma during the fifth month of Pregnancy." There was a large cauliflower-like growth from the cervix, without any infiltration of the vaginal wall or extension towards the body of the uterus. The disease had been discovered by the patient's medical man in the country a month before; and the woman was sent to Mr. Morton at the Bristol General Hospital for its removal. Dr. Lawrence, who saw the case, considered that delivery could not take place through the obstructed cervix, and that it would be needful either to remove the growth or perform Cæsarian section later on; and both Dr. Lawrence and Mr. Morton had no hesitation in deciding in favour of the former. To remove the pregnant cancerous uterus through the abdomen seemed to them an unnecessarily grave operation to undertake, seeing that had the uterus been empty it was a suitable case for supra-vaginal amputa-

[1] *Lancet*, 1896, i. 473. [2] *Ann. Surg.*, 1895, xxii. i.

tion rather than complete hysterectomy, with its far greater risks; and that even if abortion followed the supra-vaginal amputation, as it seemed to them it inevitably must, yet still the risk was less than extirpation of the pregnant uterus. The operation was performed on December 18th, 1895. The cervix was cut through by means of the galvanic ecraseur after reflection of the bladder and the peritoneum of Douglas's pouch, and ligatures had been applied to the base of the broad ligaments and uterine arteries. Abortion occurred on the fourth day. The patient was discharged, with the stump of the cervix healed, on January 16th.—Mr. GREIG SMITH ventured to disagree with the opinion that it was the best surgery to perform supra-vaginal amputation in all cases of cancerous cervix associated with pregnancy. On the contrary, he believed that total hysterectomy would, in most cases where the pregnancy was early, be the best treatment. He had personally a strong dislike to the actual cautery for such operations, unless it could be applied as Keith applied it, when it was essentially a process of desiccation. If the uterine arteries were properly secured, which ought to be the first step in cervical amputation, the operation was almost a bloodless one.—In reply, Mr. MORTON said that he had not recommended supra-vaginal amputation as a general rule in cancer of the cervix in pregnancy, but only in cases like the one he had reported. The question of complete removal of the pregnant uterus had been carefully considered, and it was felt that it was unnecessary to subject the woman to the far greater risks of such an operation, even though abortion was considered inevitable after supra-vaginal amputation. The result so far had abundantly justified such a view.

April 8th, 1896.

Mr. ARTHUR W. PRICHARD, President, in the Chair.

Dr. WATSON WILLIAMS invited the attention of the members to the Huxley Memorial Fund. The local committee hoped that intending subscribers would at their earliest convenience forward their donations to Messrs. Stuckey & Co., Clifton, marked "Huxley Memorial."

Dr. WATSON WILLIAMS exhibited two patients: (1) A child, aged 11, with cerebral spastic diplegia, resulting from injury at birth. The child was of about average intelligence, and the only notable phenomena were the usual spastic symptoms. It was peculiar in that the forearms showed clonic adduction and abduction spasmodic movements when the child attempted to use them, especially when being watched. (2) A man, aged 74, with early intrinsic laryngeal cancer. The patient had complained of hoarseness for three months, and this was the only symptom he had noticed. Examination of the larynx revealed a pinkish fringe of outgrowth along the upper surface and margin of each cord in its posterior half. But the abduction of the cords was very markedly impaired, and this fact, in the absence of any indication of disease in or around the crico-arytenoid joint, sufficed to distinguish the affection from pachydermia laryngis, which in appearance and location the new growth otherwise very closely resembled. The case was eminently suitable for radical extirpation as far as the disease was concerned, it being completely intrinsic and fairly localised. Dr. Williams had asked Dr. Swain to see the patient with a view to operation; but the age of the patient was so advanced that it was considered inadvisable to submit him to the inevitable dangers involved in a radical removal.

Dr. Williams wished, however, to lay stress on the fact that the only symptom complained of was hoarseness, and that his patient illustrated well the points of importance in connection with early malignant disease of the larynx to which he had called attention in a recent communication.[1]—With reference to the case of malignant disease of the larynx, Dr. JAMES SWAIN agreed with Dr. Williams's diagnosis, and stated that the power of abduction of the cords was much less than a few weeks ago. When the case was first sent to Dr. Swain the local condition showed it as one eminently fit for operation from a local point of view, for the disease had existed only two months and was entirely confined to the larynx. In such conditions a thyro-chondrotomy and "clearing out" of the thyroid cartilage would remove the disease; but Dr. Swain doubted the desirability of operation in cases which had passed the confines of the larynx. The case was brought before Dr. Swain's colleagues at the Infirmary, and it was thought that, considering the man's age, his chance of life would be longer if he were allowed to go on for the present, with the performance of tracheotomy when required later on. The radical operation was therefore not performed.

Dr. EDWARD CROSSMAN showed a specimen of perforating duodenal ulcer from a man, aged 44, who on April 3rd had sudden pain at the epigastrium. After apparent improvement, vomiting set in on the following day and continued till the 5th. The abdomen was much distended. There had been no action of the bowels. It was then decided to open the abdomen; but whilst on the road to the hospital the patient died. The necropsy revealed a great quantity of pus and intestinal contents free in the peritoneal cavity. About three-quarters of an inch from the pylorus there was a circular perforation of the anterior duodenal wall about the size of a threepenny-piece. It had rounded edges, and was evidently of some duration.

Mr. THOMAS CARWARDINE read a paper on "A Case of Dermoid of the Neck" (see page 145).—Mr. MUNRO SMITH remarked on the size of the bodies, which he thought was of importance as indicating that they were not morphologically ova. The fact also that in the usual method of formation of ova only one layer (the discus proligerus) is found, and that in these bodies there exists a thick layer of laminated squamous epithelium round each, seems against the theory of ovulation. Mr. Munro Smith was of opinion that these small masses were balls of epithelium formed by the cyst-wall, and triturated by constant movements into a rounded and uniform size.—Dr. JAMES SWAIN agreed with Mr. Munro Smith that the size of the ovum *was* of distinct morphological importance. Moreover, the cells were of a markedly squamous type in these apparent ova, with the centre consisting of an amorphous structure resembling sebaceous material. Dr. Swain was therefore inclined to regard these rounded bodies as being formed by exfoliation of epithelial cells lining sebaceous follicles, and when moulded therein were "shot out" in the central cavity of the tumour. In this way a large collection of epithelial balls would be collected; and Dr. Swain thought this origin was more likely than their formation by a simple mutual trituration movement, as suggested by Mr. Munro Smith.—Mr. CARWARDINE, in reply, said that the remark that size had no morphological importance meant that in the presence of facts brought out by considerations of structure and development difference in size had no value. As to the argument that the round bodies could not be homologous with ovarian follicles because they consisted of very many layers instead of one layer of epithelium, it was pointed out that sections of the cyst-wall seemed

[1] *Bristol M.-Chir. J.*, 1896, xiv. 91.

to suggest that the epithelial masses possibly took origin in connection with a single layer of cells. A careful examination of microscopic specimens did not reveal the presence of sebaceous glands in the cyst-wall.

Mr. PAUL BUSH read notes of "A Case of Compression of the Brain, due to Rupture of the Middle Meningeal Artery," which he had treated by operation, and which ended in complete recovery. The man had fallen on his head from a height of only about six feet. When first seen he had the physical signs and symptoms of fracture of base of the skull; but within half-an-hour of the accident symptoms of compression of the brain commenced and gradually increased. Mr. Bush did not see the patient till three hours after the injury, when he found no indications of fracture of the vault of the skull, but all the usual symptoms and signs of a large clot of blood pressing on the right side of the cerebrum. The patient was then almost comatose; there was bleeding from the nose and ears, there was marked proptosis and fixation of the right eyeball, and the right pupil was dilated and fixed; before the patient lapsed into the comatose condition it was thought that there was paralysis of the left arm and leg. Mr. Bush made a semi-circular flap on the right side, taking in the whole of the skin and muscle of the temporal region: a comminuted fracture was found leading down to the base; some fragments of bone were removed by the forceps, and a further portion taken away by a large trephine; a large firm clot of blood was then removed, leaving a depression in the dura mater the size of the man's fist and situated over the convolutions on either side of the fissure of Sylvius. There was then very free arterial hemorrhage, which appeared to come chiefly from the anterior and lower portion of the depression: this ceased somewhat after a torn anterior branch of the middle meningeal artery had been found and ligatured; but free hemorrhage still continued, and as the patient appeared to be *in extremis*, a large plug of iodoform gauze was pushed down towards the base chiefly—the ends were left outside the wound. The bleeding became very much less at once, and soon ceased entirely; the temporal muscle was sutured with some deep catgut, and the edges of the skin brought together. Three hours after the operation the man was able to recognise his wife, and about five hours after he was able to say a few words. The gauze was removed at the end of eighteen hours; the movements of the right eyeball were impaired for about three weeks, and there was partial facial paresis for a month. The patient, however, made an uninterrupted recovery.

Mr. MUNRO SMITH gave a lantern demonstration of photographs by the X rays, and of cases of chancres on fingers.

Dr. SHINGLETON SMITH and Mr. JAMES TAYLOR gave a lantern demonstration of some of the ordinary human parasites.

Dr. MICHELL CLARKE and Mr. JAMES TAYLOR gave a lantern demonstration of nerve cells and fibres stained by Golgi's method.

May 13th, 1896.

Mr. ARTHUR W. PRICHARD, President, in the Chair.

Dr. SHINGLETON SMITH recalled the leading facts of the case of bilateral spasmodic torticollis shown on a previous occasion (see page 100), and again produced the case to show how little was the result

which had followed the operation of excision of an inch of both spinal accessory nerves, which was performed by Mr. Harsant on the 1st of April last. Although for a time there was temporary and partial relief, the result of the operation does not justify any further operative interference. The case is an extreme illustration of the difficulties in the treatment of over-active hypertrophied muscles.—Mr. W. H. HARSANT said he had been induced to operate from reading the very favourable results which had been obtained by Mr. Noble Smith and others; but in this particular case so many muscles were involved in the spasm, that it was obviously an unfavourable case. As regards the *technique* of the operation, it is generally advised to make the incision as high as possible, beginning at the mastoid process; but in this case the nerve was more readily reached by lifting the anterior border of the sterno-mastoid about three inches from its upper end.—Dr. H. WALDO thought that if the operation had been done earlier there would have been a much better prospect of a good result, the spasm having so spread to other muscles. The over-action of nerve-cells in these cases was generally admitted to affect the lower or spinal cells rather than the cortical cells; so that if the cortical centre could be removed, there would, he thought, be less chance of improvement than with the operation which had been performed. Dr. Waldo was inclined to think that yet more good could be done by a further division of some of the posterior cervical nerve-branches.—Mr. MUNRO SMITH thought that the character of the spasm had altered very considerably since the operation; instead of being distinctly in the sterno-mastoids, it seemed to be now almost entirely in the deep muscles and in the hypertrophied platysma.—Dr. F. H. EDGEWORTH remarked that the case illustrated the general rule that if in a case of spasmodic torticollis the movements had spread beyond the trapezius and sterno-mastoid, division of the spinal accessory did little good. It was not probable that the movements in the neck were due to the sterno-mastoid, as, unlike the trapezius, that muscle had its nerve-supply solely from the spinal accessory.

Mr. C. A. MORTON showed a girl, aged 18, who had suffered from wryneck since three years of age. The deformity had deen due to contraction of the right sterno-mastoid. He had divided by the open method the muscle and several bands of the deep cervical fascia lying just over the large vessels. The result was very satisfactory. It would have been impossible to have divided these bands of fascia safely by the subcutaneous method, which has considerable risk of hemorrhage from injury to a large vessel beneath, even when the muscle alone is divided; and by an aseptic operation the wound healed just as a subcutaneous one would. The condition of the face was interesting, as it showed—what is described as present in some of these long-standing cases—the condition of slight ill-development on the side, and which had been drawn down for fifteen years.

Dr. F. H. EDGEWORTH showed a girl, aged 6 years, with right hemiplegia and aphasia of seven months duration. The onset was sudden and accompanied by loss of consciousness, but without fever, pain in the head, or convulsions. Very slight recovery had taken place in the arm, more in the face and leg, and there were athetoid movements in the arm. There was no loss of sensation. The tendon-jerks on the right side were exaggerated. The aphasia was still very marked; the child could only say "No," "Yes," "Nurse," and this only on emotion. Deliberate voluntary speech was still absent. The heart was normal; and there was no personal or family history of rheumatism or syphilis.

The child was in good health until the onset of the hemiplegia. All, then, that could be inferred as to the origin of the attack was that it was vascular in nature. The case showed that, even in children with right-sided paralysis and aphasia due to apoplexy, a cautious prognosis should be given as to the recovery of speech.—Dr. H. WALDO said he had years ago called attention to recorded cases of motor aphasia in connection with *left* hemiplegia in left-handed people. He had never seen one of these cases, and he doubted their existence.

Dr. J. E. SHAW gave the record of "A Case of Tumour of the Crus Cerebri." A man, aged 32, was seized suddenly five months before death with slight paresis and anæsthesia of the left hand, and symptoms of defective movement of the right eye, so that from erroneous projection he could not follow his work as a shoemaker. Some weeks afterwards he was found to have complete paralysis of all the branches of the right third nerve, with a slight but variable left hemiplegia; headache and vertigo were experienced, with vomiting at rare intervals; mental hebetude deepening into occasional stupor, extension of the ocular paralysis to the superior rectus and some other muscles of the left eyeball, but not implicating the levator palpebræ, and optic neuritis three weeks before death, were developed in succession. *Post mortem* a sarcomatous tumour was found within the distended right crus cerebri, extending from nearly the optic thalamus down into the fourth ventricle, into which, through the distended aqueduct of Sylvius, the free pointed extremity of the growth penetrated.

Mr. C. A. MORTON showed a specimen of tuberculous disease of the urinary organs, from a woman aged 33, which demonstrated the beneficial results of the surgical treatment of tuberculous disease of the bladder. Six months before her death supra-pubic cystotomy had been performed, and extensive ulceration in the bladder scraped and iodoform rubbed into the ulcers; the bladder was then drained from the supra-pubic opening for three months to the great relief of the patient, but on removal of the drainage tube the old pain during micturition returned. Attacks of severe pain in the right renal region set in, and she frequently passed calculi the size of a large pin's head. After an attack of pain in this region, accompanied by vomiting which lasted for several days, she died. It was found on *post-mortem* examination that the ulceration in the bladder had completely healed, and was only represented by scar tissue; but that the left kidney was full of tuberculous abscesses, although there had been no lumbar pain on that side. The right kidney was hypertrophied, and contained only a few minute tubercles and one caseating focus; but the pelvis and calyces contained large numbers of the same kind of calculi which were passed during life, and a larger calculus was lodged in the lowest part of the ureter and could not be pressed through the orifice into the bladder. Particular attention was called to the absence of pain, tenderness, or signs of kidney enlargement in the left loin, with such extensive tuberculous disease of that kidney; and it was mentioned that Mr. Cathcart's apparatus [1] for keeping the bladder empty after supra-pubic cystotomy had been found very useful in the treatment of the case. Reference was made to the cases of Watson Cheyne [2] and Mansell Moullin [3] of cystotomy, in which the ulcers had either been scraped or cauterised and the bladder generally drained—in one of Watson Cheyne's cases for as long as six months. The results in these and about a dozen other

[1] *Brit. M. J.*, 1895, ii. 968.
[2] *Lancet*, 1895, i. 1579. [3] *Ibid.*, 1308.

cases on record were good. Such measures were not to be recommended early in the disease, but when other methods of treatment failed and the patient's sufferings were very great.

Dr. HENRY WALDO read a paper on "The Treatment of Eczema," in which he said that it was always curable, and may be cured without the least fear of any injurious constitutional effects being produced. He raised the question as to washing or not, and insisted that the patient should be kept scrupulously clean upon an antiseptic plan, but that neither cold water nor soap should be used to the diseased area. He considered rest to the affected part essential, as also sealing it from the air, and that whatever application was used should contain some parasiticide. He entered into the selection of suitable applications for each case, and said that stimulating remedies, as a rule, should only be applied for an hour or so in the twenty-four hours. The patient's occupation may have to be enquired into, and his surroundings attended to, especially in relation to some plants and flowers. He believed that local treatment was much the most important, but internal diluents should be encouraged. He looked upon the administration of arsenic as usually harmful. He suggested means for combating the attending pruritus, and recommended intestinal antiseptics for cases of auto-intoxication, the one he mostly used being benzo-naphthol. He dealt fully with the question of alcoholic beverages and diet, and the effect of sea air. Moderate outdoor exercise was recommended as a prophylactic.—Dr. JOHN BROOM found the best results from attention to general details: in correcting errors or defects in general health, habits, and diet; in judiciously selecting and combining constitutional and local remedies; and in frequent ablutions with suitable medicinal soaps.—Dr. BERTRAM ROGERS had recently treated patients locally with and without internal medication, and his results had been certainly better when some constitutional treatment was adopted. He was losing his faith in arsenic, and was using less and less every year; not because he had seen irritative effects produced by it, but because he had seen little if any good follow its use. Oleate of zinc ointment, to which Dr. Waldo had not referred, was a most useful application.—Mr. J. HANCOCKE WATHEN spoke of the value of both constitutional and local treatment of eczema. Arsenic he rarely had occasion to use. Attention to the general health, and chylopoietic viscera was often sufficient internally. Locally, emollient and antiseptic treatment was of use—essentially it should be antiseptic.

Dr. THEODORE FISHER read a paper entitled "Is uncomplicated Mitral Regurgitation from Valvular Disease Common or Serious?" with the object of showing that the generally recognised view that mitral regurgitation is commonly due to deformity of the mitral valve is erroneous. He pointed out that not mere thickening of the flaps, but actual deformity is necessary to produce a leak. Referring first to the clinical features of cases of rheumatism in which a systolic apex murmur becomes audible, he thought it unreasonable to suppose that sufficient deformity of the valve to produce incompetence can be produced within a few days of the onset of a first attack. He also pointed out that in first attacks of rheumatism a pulmonary systolic murmur is nearly as common as one heard at the apex, yet no one would suppose that the pulmonary murmur is produced by endocarditis of the pulmonary valve. Dr. Foxwell has shown that there is great probability that this murmur is due to dilatation of the right ventricle, mainly in the region of the conus arteriosus; and Dr. Fisher said that his own experience bore out this view of Dr. Foxwell, and he thought

that the presence of systolic murmurs heard at the apex and over the pulmonary area in rheumatism frequently pointed to dilatation of both sides of the heart. In favour of such a view is the fact that under careful treatment not only the pulmonary but also the apex-murmur appearing during an attack of rheumatism frequently disappears after recovery. Still more conclusive, however, is the fact that examination of *post-mortem* records proves that deformity of the mitral valve leading to uncomplicated regurgitation is extremely rare. Dr. Fisher then referred to the importance of the fact that mitral regurgitation produced by rheumatism is due to dilatation of the heart and not to deformity of the valve.

J. PAUL BUSH, *Hon. Sec.*

Plymouth Medical Society.

December 18th, 1895.

Dr. C. A. HINGSTON, President, in the Chair.

Dr. E. LAWRENCE FOX shewed specimens from a case of multiple sarcoma. The patient, a girl aged 16, suddenly became diplopic six months before death, and soon after developed lumps in both mammæ with pains across shoulders and in right knee. Her legs became weaker, until one morning she was unable to stand. Then the legs became immobile, and sensation was impaired; incontinence of urine followed, and various lymphatic glands in neck and axillæ became involved. Three months before death numerous hard nodules appeared in abdominal walls, and headache was complained of, followed by continual vomiting. A month later there was deafness, and the tongue deviated to the right. The temperature was raised throughout, sometimes to 103° or 104°, till death occurred. At the necropsy sarcoma was found generally throughout the body. The peritoneum and mesenteric glands were largely affected; both ovaries and kidneys contained numerous new growths—calcareous in the former, but cystic in the latter; one growth was found in each lobe of the liver, but none in spleen or lungs. The mammæ consisted almost entirely of new growths. The spinal cord was not affected. Brain not examined.

Mr. A. G. RIDER showed a cyst removed from the right occipital region of a girl, aged 6 years. At birth there was a swelling in this situation which became tense on crying. Latterly, mother noticed that the swelling did not vary in size as formerly. The tumour on incision yielded clear fluid; the cavity was lined with a perfectly smooth membrane, and had a small process or neck at one point. It was regarded as an obliterated lateral occipital meningocele.

January 2nd, 1896.

Dr. C. A. HINGSTON, President, in the Chair.

Mr. W. L. WOOLLCOMBE read a paper on "The Surgical Aspects of Appendicitis."

February 8th, 1896.

Dr. C. A. HINGSTON, President, in the Chair.

Mr. R. H. LUCY demonstrated the results of the radical treatment of inguinal hernia after relief of strangulation in a man, aged 66, operated on two years ago by Mitchell Banks's method. He also showed a man, aged 45, whose pile-bearing area had been removed six months ago by Whitehead's method.

Mr. W. C. HAMILTON brought forward for Mr. Whipple a young man with primary sore and secondary rash, now under treatment by increasing doses of anti-syphilitic serum. He also exhibited a number of calcareous particles coughed up by a man, aged 25, with phthisical signs in both lungs.

Mr. G. F. ALDOUS exhibited (1) Sub-periosteal sarcoma, springing from the back of the lower end of the right femur, infiltrating tissues in the popliteal space and commencing to attack the bone. The tumour was a hemorrhagic diffluent mass, and had been growing rapidly for four months in a woman aged 48. The thigh was amputated through the upper third. (2) Fracture running through the body of the sphenoid bone, lacerating the anterior cerebral arteries, with hemorrhage into the frontal lobes. The patient, a man aged 55, of alcoholic habits, fell down eight steps at 11 p.m., got up, said he felt "all right," went to bed and became unconscious, but was treated by friends as drunk. He was seen on morning of third day, and found to be partly comatose. There was no paralysis; but he lapsed into coma, with incontinence of urine and fæces, and died on 6th day.

Dr. WEBBER showed a heart removed from a man, aged 54, who died from angina pectoris. It weighed fourteen ounces; the surface of the ventricle was loaded with fat, and the myocardium was fatty. Ventricles distended with *ante-mortem* clot, and the mitral valve contained one or two calcareous nodules, but was competent. The aortic valves were atheromatous and incompetent, each sinus of Valsalva being calcareous. Of the coronary arteries, the right was calcified for over an inch from its origin, and the left for rather less.

February 26th, 1896.

Dr. C. A. HINGSTON, President, in the Chair.

Mr. A. G. RIDER read a paper on "Some Affections of the Throat."

March 21st, 1896.

Dr. C. A. HINGSTON, President, in the Chair.

Mr. J. NORRIS showed a well-marked case of pseudo-hypertrophic paralysis in the second stage in a boy aged 8 years.

Mr. C. E. RUSSEL-RENDLE showed (1) Three generations in one family, aged 10 years, 39 years, and 59 years respectively, with well-marked lamellar cataract. (2) A bony plate perforated by the central artery of the retina, found in the choroid of an eye removed for pan-ophthalmitis in a woman aged 43.

Mr. R. H. Lucy exhibited (1) An old fracture in the outer fourth of the right clavicle in a man aged 56, with downward displacement of the arm and outer fragment. (2) A haulier, aged 30, with marked prominence of each acromial end of his clavicles and lax acromio-clavicular ligaments, allowing an apparent dislocation of the latter.

Mr. W. L. Woollcombe showed (1) A finger on the dorsum of which was a growth resembling a sarcoma, but which was found on microscopical examination to be tubercular; the focus being a depression on the side of the head of the metacarpal bone. A slide, prepared by Dr. Webber, was shown with it. (2) A photograph of a man, aged 50, whose posterior ulnar ridges showed three symmetrical nodes. There was a history of two attacks of acute rheumatism, but no peri- or endocardial mischief.

Dr. Pethybridge showed (1) A slide of diphtheritic membrane with Löffler's bacilli *in situ*; and (2) A slide of bacteria of the mouth.

Mr. J. E. Square exhibited a specimen of an eye showing retinal detachment, and a plate of bone in the choroid in a male aged 55.

April 11th, 1896.

Dr. C. A. Hingston, President, in the Chair.

Dr. Charles Aldridge read a paper on "Testamentary Capacity."

R. H. Lucy, *Hon. Sec.*

Swansea Medical Society.

March 3rd, 1896.

Dr. D. Arthur Davies in the Chair.

Dr. N. Fox Edwards showed a man, aged 38, with malignant disease of the tonsil and soft palate. When the patient first came under observation, about six weeks previously, the extent to which the growth had infiltrated the surrounding tissues negatived any operative measures, and during this six weeks he had been treated with pyoktanin, 30 minims of a saturated solution having been injected daily into the substance of the growth. Very little pain or hemorrhage was caused by the injections. During this period the growth appeared to remain in a stationary condition, though the patient himself strongly affirmed that it was decreasing.—Mr. Brook considered that the chief effect of the pyoktanin had been to render the whole malignant mass much softer; but that no real improvement had taken place.—Dr. Lancaster suggested that if the supposed action of the aniline dyes upon malignant new growths were due, as generally stated, to their selective affinity for the proliferating nuclei, the action of any particular aniline dye upon a morbid growth should stand in direct ratio to its affinity for cell nuclei: hence safranin, which of all the anilines has

probably the greatest affinity for nuclei, might be expected to yield better results than pyoktanin.[1]

Mr. KYNASTON COUCH exhibited a tonsillar calculus, about the size of a large hazel-nut, which he had removed from the tonsil of a woman, aged 24. When fresh it weighed about 50 grains, and when dried about 30 grains. Originally this calculus must have been a very large one, as the patient stated that twelve months previously a piece of "stone" of about equal size had been removed from the same tonsil.

March 17th, 1896.

Dr. F. KNIGHT in the Chair.

Dr. A. F. BLAGDON RICHARDS read a paper on "Pathogenic and Non-Pathogenic Micro-Organisms," contending that the characteristics of the various micro-organisms known at present are by no means fixed; but that under suitable conditions micro-organisms which ordinarily exert no specific pathogenic effect upon human tissues may develop the capacity to produce such an effect, and *vice-versâ*.

April 7th, 1896.

Mr. E. B. EVANS, President, in the Chair.

Dr. R. C. ELSWORTH showed a specimen of an ovarian cyst with twisted pedicle. The patient from whom he had removed the cyst was a middle-aged spinster with the following history: Her general health was good, and she was ignorant of the existence of a tumour. A small fire had broken out in her room, and she extinguished it by throwing several buckets of water over it; in doing this she swung the full buckets from right to left, and so employed her abdominal muscles to an unaccustomed degree. Immediately afterwards she was seized with a violent pain in the lower abdomen and vomited. When seen by Dr. Elsworth she was in extreme pain and somewhat collapsed; and a tense rounded tumour reaching some five inches above the pubes was easily seen and felt on abdominal palpation. Ovarian cystoma with twisted pedicle was diagnosed, and ovariotomy was performed thirty hours after the symptoms first appeared. When the abdomen was opened, the tumour was found to be a cystoma of the right ovary, and one complete revolution of the tumour upon its pedicle had taken place, so that the original anterior surface of the cyst still presented anteriorly. The rotation had occurred *from right to left*, *i.e.* in the same direction as the patient had exerted unusual muscular force in swinging the full buckets. There was no actual peritonitis, but the veins on the surface of the cyst were distended with dark blood, and the pedicle and the surrounding tissues were very deeply congested and dusky-red in colour. It was necessary to place the ligature on the pedicle very close to the uterus; but the operation otherwise was uncomplicated. The woman did very well for about a day and a half,

[1] May 10th. Since the former date the growth has rapidly enlarged, broken down, and ulcerated; the daily injections of pyoktanin have been steadily persevered with. The patient has been practically free from pain both before and also during this treatment. From its appearance the growth is probably a sarcoma.

then she became suddenly collapsed and died. At the autopsy it was found that the ovarian vein had ruptured some three inches above the pedicle, causing profuse internal hemorrhage. Dr. Elsworth remarked that he had not succeeded in finding any case recorded in which death after ovariotomy had resulted through rupture of the ovarian vein. In the discussion which followed it was generally considered that the rupture was due to the morbid condition of the vein-wall, resulting from the interference with the blood circulation consequent upon the rotation.

April 21st, 1896.

Mr. E. B. EVANS, President, in the Chair.

Dr. N. FOX EDWARDS read a paper upon "The Medicinal Treatment of Phthisis," referring especially to the good effects of a long-continued exhibition of guaiacol.

May 14th, 1896.

Mr. E. B. EVANS, President, in the Chair.

Dr. ISAMBARD OWEN, Senior Deputy Chancellor of the University of Wales, and Physician to St. George's Hospital, delivered an address on "The Prevention of Phthisis."

In the evening the annual dinner was held, when thirty-nine members of the Society and visitors were present.

Annual Meeting, May 19th, 1896.

Mr. E. B. EVANS, President, in the Chair.

The following officers were chosen for the ensuing year:—President; Dr. H. A. Latimer: Vice-President; Mr. E. B. Evans: Treasurer; Mr. J. Kynaston Couch: Committee; Mr. E. Davies, Dr. F. Knight, Dr. R. C. Elsworth, Dr. E. Forsyth: Honorary Secretaries; Dr. E. Le Cronier Lancaster and Mr. J. K. Couch.

E. LE CRONIER LANCASTER, } *Hon.*
J. KYNASTON COUCH, } *Secs.*

Torquay Medical Society.

April 15th, 1896.

Dr. REGINALD POLLARD, President, in the Chair.

The President read notes of "A Case of Cæsarean Section," performed by him on a woman who was sent into the hospital in labour; but where delivery in the ordinary way was prevented by a cysto-fibroma springing from the lower part of the back of the

uterus. The woman had been some time under chloroform before the operation, whilst attempts were made to deliver; but it was found impossible, and Cæsarean section was performed. The uterine wound was closed by superficial and deep sutures of carbolised silk, inserted by the Sänger-Leopold method. It was not thought advisable to attempt removal of the uterus and tumour, which had numerous adhesions to the pelvis. The patient unfortunately never rallied, and died from shock within forty-eight hours. P.M.E.: Abdomen distended with flatus; but no sign whatever of peritonitis. Uterine wound and abdominal peritoneum united and healthy. The tumour, which was larger than a child's head, was connected by a pedicle to the posterior part of the uterus or upper part of cervix—there were numerous adhesions to the pelvis. There was general thickening of the uterine walls, and one or two other fibroids commencing. An incision into the tumour showed that it was cystic and contained a yellowish fluid. The patient, whose menstrual flow was slightly excessive, had been married six years, and had had three miscarriages and one six-months' premature birth; but no tumour had been discovered until she was in labour and was seen by Drs. Andrew and Winter.

Mr. WINTER read a paper on "Diphtheria."

G. YOUNG EALES, *Hon. Sec.*

The Library of the Bristol Medico-Chirurgical Society.

The following donations have been received since the publication of the list in March:

May 30th, 1896.

C. W. J. Brasher (1)	1 volume.
L. M. Griffiths (2)	4 volumes.
Laryngological Society of London (3)	2 ,,
Royal Academy of Medicine in Ireland (4) ...	1 volume.
Royal College of Surgeons of England (5)	1 ,,
James Swain, M.D. (6)	1 ,,
J. Wright & Co. (7)	1 ,,

Unbound periodicals have been received from Dr. James Swain. Framed pictures have been presented by Mr. F. R. Cross, Mr. G. Barry Hart, and Mr. H. E. Hetling.

TWENTIETH LIST OF BOOKS.

The titles of books mentioned in previous lists are not repeated.

The figures in brackets refer to the figures after the names of the donors, and show by whom the volumes were presented. The books to which no such figures are attached have either been bought from the Library Fund or received through the *Journal*.

Allingham, W. and H. W. *Diseases of the Rectum* ... ... 6th Ed. 1896
Ballantyne, J. W. *Curettage of the Uterus* 1896
Bell, R. ... ... *Sterility* 1896
Binz, C. ... ... *Lectures on Pharmacology.* Vol. I. (Tr. from 2nd German Ed. by A. C. Latham) 1895
Boerhaave, [H.] ... *Aphorisms* (Translated) ... ... (1) 1742
Boisliniere, L. C. *Obstetric Accidents, Emergencies, and Operations* 1896
Brothers, A. ... *Infantile Mortality during Child-birth and its Prevention* 1896
Buret, F. ... ... *Syphilis in the Middle Ages and in Modern Times* (Tr. by A. H. Ohmann-Dumesnil) 1895
Collins, E. T. ... *Researches into the Anatomy and Pathology of the Eye* 1896
Duncan, A. ... ... *Memorials of the Faculty of Physicians and Surgeons of Glasgow*, 1599-1850 1896
Eccles, W. McA.... *Elementary Anatomy and Surgery for Nurses* 1896
Gant, S. G. ... ... *Diseases of the Rectum, Anus, and Contiguous Textures* 1896
Gardner, H. B. ... *The History of Surgical Anæsthesia* ... ... [1896]
Gubb, A. S. ... *Le Placenta dans la Grossesse extra-utérine* ... ... (6) 1893
Harvey, W. ... *Prelectiones Anatomiæ Universalis*, [1616] ... ... (5) 1886
Hedley, W. S. ... *Current from the Main* 1896
Jessop, C. M. ... *Dress and Health* 1896
Kenwood, H. R.... *Public Health Laboratory Work* ... ... 2nd Ed. 1896
Lexicon of Medicine and the Allied Sciences (New Syd. Soc.). Pin—Puke... 1895
McFarland, J. ... *A Text-Book upon the Pathogenic Bacteria* 1896
Mellin, G. [Ed.]... *The Feeding of Infants and Growing Children* 1895
Miller, A. G. ... *On the Diagnosis of Tubercular Joint Disease* 1896
Moure, E. J. ... *Du Traitment chirurgical de la Surdité et des Bourdonnements* 1896
Murray, W. ... *Rough Notes on Remedies* 1896
Obstetrics, An American Text-Book of (Ed. by R. C. Norris). 2 vols. ... 1896
Oeynhausen und seine Indicationen ... ... [N.D.]
Pharmacopœia of the Evelina Hospital for Sick Children... ... ... 2nd Ed. 1895
Prichard, A. ... *A Few Medical and Surgical Reminiscences* 1896
Quain, [J.] ... ... *Elements of Anatomy.* 10th Ed. (Ed. by E. A. Schäfer and G. D. Thane). ... ... Appendix 1896
Roberts, C. ... ... *The Medical Inspection of, and Physical Education in, Schools* 1896
Sibley, W. K. ... *State Aided* v. *Voluntary Hospitals* 1896

Sutton, J. B. ... *Surgical Diseases of the Ovaries and Fallopian Tubes, including Tubal Pregnancy* ... ...New Ed. 1896
Thompson, W. G. *Practical Dietetics* 1896
Unna, P. G. ... *The Histopathology of the Diseases of the Skin* (Tr. by N. Walker) 1896
[Zaehnsdorf, J.] ... *A Short History of Bookbinding* 1895

TRANSACTIONS, REPORTS, JOURNALS, &c.

Alienist and Neurologist, The... ... ... Vol. XVI. 1895
American Dermatological Association, Transactions of the 1896
American Gynecological Society, Transactions of the ... ...Vol. XX. 1895
American Laryngological Association, Transactions of the 1896
American Ophthalmological Society, Transactions of the Vol. VII., Part II. 1896
American Pediatric Society, Transactions of the ... ... Vol. VII. 1895
American Surgical Association, Transactions of the... ... Vol. XIII. 1895
Archivio di Ortopedia 1895
Bristol and Clifton Directory ... ... (7) 1896
Bristol Health Report ... ... (2) 1887
Bristol Medico-Chirurgical Journal, The ... ... Vol. XIII. 1895
Bristol Port Sanitary District—Annual Report of the Medical Officers of Health ... ... (2) 1893; 1896
Bulletin de l'Académie de Médicine 3e Sér. Tomes XXXIII., XXXIV. 1895
Bulletin de l'Académie royale de Médicine de Belgique ... Tome IX. 1895
Canadian Practitioner, The ... ...Vol. XX. 1895
Clinical Journal, The ... ... Vol. VII. 1896
College of Physicians of Philadelphia, Transactions of the 3rd Ser. Vol. XVII. 1895
Epidemiological Society of London, Transactions of the N.S. Vol. XIV. 1895
Giornale Internazionale delle Scienze Mediche 1895
Hospital, The ... ... Vol. XIX. 1896
Hospitals—
- Johns Hopkins Hospital Reports, The ... ... Vol. IV. 1895
- King's College Hospital Reports ... ... Vol. II. 1896
- Saint Bartholomew's Hospital Reports ... ... Vol. XXXI. 1895
- Saint Thomas's Hospital Reports ... ... N.S. Vol. XXIII. 1896

Intercolonial Quarterly Journal of Medicine and Surgery ... Vol. II. 1896
International Medical Magazine ... ... Vol. IV. 1896
Johns Hopkins Hospital Bulletin, The... ... ... Vol. VI. 1895
Laryngological Society of London, Proceedings of the (3) Vols. I., II. 1895-96
Medical Annual, The 1896
Medical News, The ... ...Vol. LXVII. 1895
Medical Society of Virginia, Transactions of the 1895
New Zealand Medical Journal, The ... ... Vol. VIII. 1895

Obstetrical Transactions	Vol. XXXVII.	1896
Royal Academy of Medicine in Ireland, Transactions of the	(4) Vol. XIII.	1895
Sei-I-Kwai Medical Journal, The	Vol. XIV.	1895
Union médicale, L'	4e Sér. Tome I.	1895
Universal Medical Journal, The	N.S. Vols. I., 1893; III.	1895
Year-Book of Scientific and Learned Societies		1896

Local Medical Notes.

BATH.

W. H. Symons, M.D. Brux., D.P.H. Oxon, has been appointed Medical Officer of Health for the city, in place of Dr. Brabazon, deceased.

Mineral Water Hospital.—Preston King, B.A., M.D. Cantab, has been appointed Physician in place of Dr. Brabazon, deceased.

BRISTOL.

Port Sanitary District.—Although there was no cholera scare during 1895, the medical officers of the port sanitary districts of the kingdom were on the alert to prevent the introduction of that disease. Now that quarantine has been abolished as unsatisfactory, constant and unremitting care and attention are necessary to carry out effectually the system now employed, for unless this work is done thoroughly it would be of no effect. The report of the Bristol Port Sanitary Authority has been distributed, and it shows how night and day ships coming to the port sanitary area of Bristol are being overhauled to discover the possible presence of infectious diseases on board. In addition to the ordinary infectious diseases, special attention was drawn during the year to the possible introduction of yellow fever from the port of Santos in Brazil, and though no one came under observation, disinfecting precautions were taken in one case. The report states that 1390 ships were inspected, of which 1106 were returned as good and 284 as unsatisfactory, showing on the whole improved sanitary conditions on board both foreign and coastwise vessels. Of the total number 781 were specially examined for cholera as they sailed from suspected ports, and in 37 cases it was found necessary to carry out the usual precautionary disinfecting measures. Only two ships arrived on which cases of cholera had actually occurred. Shipowners appear to fall in fairly readily with the required sanitary improvements suggested by the port authorities; but we notice that a considerable number of visits had to be paid before the requirements were carried out, and whether they are in all cases carried out cannot be stated, for the vessels have not all returned to the port of Bristol. Certain ships coming within the port sanitary area are bound for Gloucester, and by an arrangement with the authorities the cost of inspection is charged to that city. The steam launch at the disposal of the medical officers came to grief in September, and it was found impossible to perform the necessary work

in the Severn in a row boat. This we can well believe. Only seven cases were admitted into the port hospital at Avonmouth during the year, of which all recovered.

The Degree of M.D. Durham has been conferred on C. E. Matthews, M.R.C.S. Eng., and on A. E. Blacker, L.R.C.S. Ed., and that of M.D. St. Andrews on Charles A. Hayman, L.R.C.S.I. At a quarterly meeting of the Comitia of the Royal College of Physicians of London on April 30th, John Michell Clarke, M.A., M.D. Cantab., Professor of Pathology at University College, was elected a Fellow.

UNIVERSITY COLLEGE.—C. A. La Touche Brough, LL.B., M.B., B.S. Durh., has been appointed Medical Tutor in place of A. E. H. Pinch, resigned. The following students have passed examinations: EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS: *First Examination. Part I. Chemistry and Physics*—H. G. Clark, S. L. Compton; *Part II. Practical Pharmacy*—E. Symes; *Part III. Elementary Biology*—J. A. Bartlett, L. A. Moore, J. C. Norton, G. S. Oades, A. M. S. Tordiffe, J. C. Wadmore, C. F. Walters. *Second Examination. Anatomy and Physiology*—E. G. Bunbury, J. R. Frost, H. M. Thomas. *Final Examination.* C. F. Druitt.* SOCIETY OF APOTHECARIES: *Surgery*—A. F. Morgan.*

GENERAL HOSPITAL.—Martin Randall, B.A., M.D. Lond., F.R.C.S. Eng., has been appointed House Surgeon.

HOSPITAL FOR SICK CHILDREN AND WOMEN.—John Ewens, L.R.C.S., L.R.C.P. Edin., and T. Chalmers Norton, M.R.C.S. Eng., have resigned their posts as Surgeons and have been elected on the Consulting Staff. C. A. Morton, F.R.C.S. Eng., and H. W. Kendall, M.R.C.S. Eng., have been elected Surgeons. Colston Wintle, M.R.C.S. Eng., and Emily E. Eberle, M.A., M.B., B.Ch. R.U.I., have been elected Out-Patient Surgeons.

SWANSEA.

GENERAL AND EYE HOSPITAL.—R. C. Elsworth, M.B., C.M. Edin., M.R.C.S. Eng., has been appointed Surgeon, *vice* G. Herbert Hopkins, F.R.C.S., resigned. A. F. Blagdon Richards, M.A., M.B., B.C. Cantab., M.R.C.S., L.R.C.P. Lond., has been appointed Medical Officer to the Throat and Ear Department, *vice* R. C. Elsworth, resigned.

INSTITUTION FOR THE BLIND.—E. Le Cronier Lancaster, B.A., M.B., B.Ch. Oxon, M.R.C.S. Eng., has been appointed Hon. Physician, *vice* G. Herbert Hopkins, F.R.C.S., resigned.

INTERNATIONAL CONGRESS OF DERMATOLOGY.

The third Congress is to be held in London from the 4th to the 8th of August. Mr. Jonathan Hutchinson is the President. All information concerning the Congress can be obtained from the Secretary-General, Dr. J. J. Pringle, 23 Lower Seymour Street, London, W.

INTERNATIONAL CONGRESS OF GYNÆCOLOGY AND OBSTETRICS.

It has been determined to hold the second session of the Congress at Geneva during the first week in September. Dr. Leith Napier, of 67 Grosvenor Street, London, W., is the Secretary for Great Britain.

* Completes Examination.

SCRAPS

PICKED UP BY THE ASSISTANT-EDITOR.

Clinical Records (15).—A groove in a hole is indeed a curiosity. An item in one of the newspapers recounts the sad case of a Staten Island dentist who broke a tooth that he was extracting, and was struck in the eye by a fragment of it. "It was discovered," says the article, "that a groove had been made in the pupil of the eye by the flying particle of tooth." It is added that the doctor in attendance has "but few hopes" of saving the sight of the injured eye.—*New York Medical Journal.*

"The Weary Treadmill."—Dr. H. O. Walker, in his Presidential Address before the Michigan State Medical Society, urged the importance of the yearly holiday to relieve the strain described in the following lines:—

To be day and night at the beck and call
  Of men who cheat, and women who lie,
To know how often the scoundrels live,
  And see with sorrow the dear ones die;
To be laughed to scorn as the man who fails
  When nature claims her terrible debt,
To give a mother her firstborn's smile
  And leave the eyes of the husband wet;
To face and brave the gossip and stuff
  That travels about through a country town,
To be thrown in the way of hysterical girls
  And live all terrible scandals down,
To study at night—in papers hear
  Of new diseases and human ills,
To work like a slave for weary years
  And then be cursed when you send your bills.

A Smallpox Visitation.—The tremendous destruction of life caused by smallpox, previous to the discovery of vaccination, can hardly be realised in our day. The disease was never absent from the chief towns, the victims in London numbering thousands yearly; but it occasionally became epidemic, and was as destructive as was the plague in the seventeenth century or the cholera within living memory. A frightful outbreak occurred in 1758, when one-tenth of the total mortality was due to it. Gloucestershire especially suffered severely, and in Cirencester the havoc was so great that the neighbouring farmers refused to enter the town, and the markets were held in the outskirts. At length, after the scourge had raged for over three months, the following advertisement, signed by the churchwardens, overseers, and high constables, was published in the *Gloucester Journal*:—"Cirencester, June 27, 1758. Whereas the smallpox is greatly upon the decline in this town, and must in a short time be entirely over, *there being but few people remaining to have it*, this is to give notice that whoever shall presume to bring any person or persons from any distant place or places into this town (not belonging to this parish) having the smallpox, or in order to have it here, shall be prosecuted with the utmost rigour of the law." Similar notices were published by the authorities of Tewkesbury, Winchcombe, and other towns.—N.R. in *Bristol Mercury*.

Medical Philology (XVIII).—The *Promptorium* (1440) gives "CODDE, of mannys pryuyte. *Piga, mentula.*" Pynson's printed edition reads "preuy membris" and "*testiculus, fiscus.*" The *New English Dictionary* says that Cod was improperly used in the plural to signify the testicles.[1] In this way it served to form the point of one of the dubious pleasantries which occurred in the course of Touchstone's wooing of Jane Smile (*As You Like It*, II. iv. 51-4). But the *Promptorium* entry, although not very definite in its Latin equivalents, shows that with this signification it was also used in the singular number. This is also shown in Cotgrave, *s.v.* "couille," "couillon," etc.

Early medical books also used "cods" to signify "testicles." Phaer's *Regiment of Life* (1553), under the heading of "Swelling of the coddes," describes many "a goodly plaister for swellyng of the stones" (sig. T. 4 *verso* and sig. Aa 5 *verso*). One of the sections in Nicholas Udall's translation (1559) of the *Treatyse of Anatomie* by Geminus, is entitled: "Of the purce conteynynge the Testicles called commonly the Coddes" (sig. A. 5 *recto*). Most anatomical and surgical works of a somewhat later period restricted the use of the term

[1] "Balocke cod" was Middle English for testicle. In the *Journal* for Sept., 1890, in a note on "the familiar name by which the schoolboy calls his testicles" I referred to this with some detail.

to either the scrotum or its covering, although occasionally in such the plural of the word is used for the testicles (see Mosan's translation of Wirsung's *General Practise of Physicke*, 1617, p. 276; Levens's *Path-way to Health*, 1632, p. 49 *verso*; Culpeper's *Last Legacy*, "Febrilia," 1656, p. 50). Helkiah Crooke, in his *Body of Man* (1615), says "the cod is a rugous and thin skin" (p. 250). Culpeper, in his translation (1677) of *The Anatomy of the Body of Man* by Veslingus, says of the scrotum, "We in English call it the Cods" (p. 24). Gibson's *Anatomy of Humane Bodies Epitomized* (4th Ed., 1694, p. 147) describes the testicles as hanging "at the root of the Yard, in the Cod." "A New Chirurgical Dictionary" added to Le Dran's *Observations in Surgery* defines "Pneumatocele" as "a Wind-Rupture in the Scrotum, or Cod" (3rd Ed., Tr. by J. S., 1758); and Percival Pott, in his *Chirurgical Works* (1783), says that ruptures "are called *inguinal*, *scrotal*, *femoral*, *umbilical*, and *ventral*, as they happen to make their appearance in the groin, cod, thigh, navel, or belly" (vol. ii., p. 14). All the books mentioned in this paragraph can be seen in the Bristol Medical Library.

Cod was used to denote a variety of things connected with its etymological origin of bag or pillow. Among other things it signified a purse, a term often now applied to the scrotum; and peascod is still familiar.

One of the most interesting points in connection with the word is the suggestion (see Skeat, *Etymological Dictionary*) that "Coddle" in the sense of "to make effeminate" literally means "to castrate," and is made up of *cod* with the weakening suffix *-le*, which forms part of such words as article, cradle, molecule, nucleus, particle. Skeat thinks that the passage in Beaumont and Fletcher's *Philaster* (1611) bears this meaning, where the Captain threatening Pharamond says:

> "Down with your noble blood; or, as I live,
> I'll have you coddled." (v. iv. 30–1.)

In the otherwise tight breeches worn about the period of the sixteenth century there was, for the accommodation of the genital organs, a special arrangement known as the "Cod-piece," which was ornamented [1] and tied up with "points" of lace or silk. The literature of the time abounds in references to this conspicuous portion of attire, and we need go no further than Shakspere for sufficient instances. When Julia, in man's dress, was about to seek Proteus, her maid insisted upon the assumed breeches being provided with a cod-piece (*Two Gentlemen of Verona*, II. vii. 55). Borachio called attention to the anachronism in art which the tapestry-makers committed in representing Hercules with a cod-piece (*Much Ado About Nothing*, III. iii. 146). Not only was it conspicuous, but it was also made to serve useful purposes. Lucetta's acquaintance with the fashions enabled her to inform Julia that the only correct form was that which allowed it to be used as a pincushion. It was sometimes provided with a pocket. One of the accomplishments of Autolycus was his ability to "geld a cod-piece of a purse" (*Winter's Tale*, IV. iv. 623).

A piece of folk-lore which gathered about this important site finds expression in the French *esguillette nouée*, which Cotgrave (1611) renders "the charming of a man's codpeece-point so, as hee shall not be able to use his owne wife, or woman (though he may use any other)." Cotgrave adds "this impotencie is supposed to come by the force of certaine words vttered by the charmer, while he ties a knot on the parties codpeece-point."

In metaphorical language cod-piece did duty for its contents. When that man about town, Lucio, learned that his friend Claudio was condemned to death for having got Juliet with child, he thought it a ruthless thing that Angelo should have revived an obsolete Viennese law to inflict such a punishment merely for "the rebellion of a cod-piece" (*Measure for Measure*, III. ii. 122). Biron apostrophises Cupid as "king of cod-pieces" (*Love's Labour 's Lost*, III. 186); and allusion to it by the Fool will be found in *Lear*, III. ii. 27, 40.

Women wore similar appendages to receive the breasts. Harrison (1577), who was alarmed at the little difference between the dress of the two sexes, and who said that it "passed his skill to discern whether they were men or women," speaks of women's "doublets with pendant codpeeses on the brest full of iags & cuts" (*Description of England*, New Shakspere Soc. ed., 1877, Part I., p. 170).

[1] The stranger in "Slawkenbergius' Tale" in *Tristram Shandy*, when he arrived at Strasburg "put his breeches with his fringed cod-piece on."